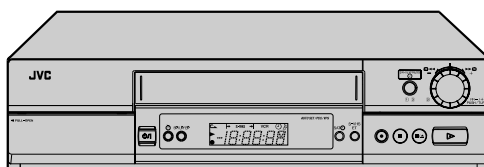


JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-S6960Ex, HR-S6965EF



Hi-Fi **S**VHS⁶²⁵
Super VHS ET
SHOWVIEW[®]
DELUXE

Regarding service information other than these sections, refer to the service manual No. 82957 (HR-S8960EX). Also, be sure to note important safety precautions provided in the service manual.

SPECIFICATIONS *(The specifications shown pertain specifically to the model HR-S6960EX.)*

GENERAL

Power requirement : AC 220 V ~ 240 V~, 50 Hz/60 Hz
Power consumption
Power on : 18 W
Power off : 3.3 W
Temperature
Operating : 5°C to 40°C
Storage : -20°C to 60°C
Operating position : Horizontal only
Dimensions (WxHxD)
: 400 mm x 94 mm x 270 mm
Weight : 3.3 kg
Format : S-VHS/VHS PAL standard
Maximum recording time
(SP) : 240 min. with E-240 video cassette
(LP) : 480 min. with E-240 video cassette
(EP) : 720 min. with E-240 video cassette

VIDEO/AUDIO

Signal system : PAL-type colour signal and CCIR monochrome signal, 625 lines
50 fields
Recording system : DA4 (Double Azimuth) head helical scan system
Signal-to-noise ratio : 45 dB
Horizontal resolution
(SP/LP) : 250 lines (VHS)
400 lines (S-VHS)
(EP) : 220 lines (VHS)
350 lines (S-VHS)
Frequency range : 70 Hz to 10,000 Hz (Normal audio)
20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output : 21-pin SCART connectors:
IN/OUT x 1, IN/DECODER x 1
RCA connectors:
VIDEO IN x 1, AUDIO IN x 1,
AUDIO OUT x 1
S-Video connector:
IN x 1

TUNER/TIMER

TV channel storage capacity : 99 positions (+AUX position)
Tuning system : Frequency synthesized tuner
Channel coverage : VHF 47 MHz ~ 89 MHz/
104 MHz ~ 300 MHz/
302 MHz ~ 470 MHz
UHF 470 MHz ~ 862 MHz
Aerial output : UHF channels 22 ~ 69 (Adjustable)
Memory backup time : Approx. 10 min.

ACCESSORIES

Provided accessories
: RF cable,
Infrared remote control unit,
"R6" battery x 2

*Specifications shown are for SP mode unless otherwise specified.
E.& O.E. Design and specifications subject to change without notice.*

HR-S6960EX, HR-S6965EF V16S1

CONTENTS

DIFFERENT LIST	1 only
3. ADJUSTMENT	
3.1 Electrical adjustment	3-1
3.1.1 PAL/SECAM converter circuit[EF MODEL]	3-1
3.1.1.1 Colour difference level	3-1
3.1.1.2 SECAM burst position	3-1
4. CHARTS AND DIAGRAMS	
4.1 S-P CONVERTER SCHEMATIC DIAGRAM [EF MODEL]	4-1
4.2 MAIN(SECAM) SCHEMATIC DIAGRAM [EF MODEL]	4-3
4.3 S-P CONVERTER CIRCUIT BOARD [EF MODEL]	4-4
5. PARTS LIST	5-1
5.1 EXPLODED VIEW	5-1
5.2 PARTS LIST	5-4
PACKING AND ACCESSORY ASSEMBLY<M1>	5-4
FINAL ASSEMBLY<M2>	5-4
MECHANISM ASSEMBLY<M4>	5-4
MAIN BOARD ASSEMBLY<03>	5-5
2D DIGITAL BOARD ASSEMBLY<05>	5-13
TERMINAL BOARD ASSEMBLY<06>	5-13
A/C HEAD BOARD ASSEMBLY<12>	5-15
DEMOD BOARD ASSEMBLY<14>	5-15
S JACK BOARD ASSEMBLY<36>	5-16
ADV. JOG BOARD ASSEMBLY<39>	5-16
LOADING MOTOR BOARD ASSEMBLY<55>	5-16
S-P CONV. BOARD ASSEMBLY<87> [FOR HR-S6965EF]	5-16

DIFFERENT LIST

DIFFERENT TABLE OF FEATURE

The following table indicate main different points between models HR-S8960EX, HR-S6960EX and HR-S6965EF.

ITEM \ MODEL	HR-S8960EX	HR-S6960EX	HR-S6965EF
JOG/SHUTTLE DIAL ON DECK	ADV. JOG with SPUTTERING	ADVANCED JOG	←
SATELLITE CONTROLLER	PROVIDED	OPTIONAL	←
SCART CABLE	OPTIONAL	←	PROVIDED
FLYING ERASE HEAD	USED	NOT USED	←
+1/2 DIGITAL SLOWMOTION	USED	NOT USED	←
RE-TAKE	USED	NOT USED	←
ASSEMBLE EDIT	Z.F.E.	A.F.E.	←
INSERT	USED	NOT USED	←
AUDIO DUBBING	USED	NOT USED	←
VIDEO SYSTEM : MESECAM	USED(MANUAL)	←	USED
VIDEO SYSTEM : SECAM	NOT USED	←	USED
SECAM to PAL CONVERTER	NOT USED	←	USED
3R PICTURE	USED	NOT USED	←
TBC	USED	NOT USED	←
FRAME MEMORY	USED(2M)	NOT USED	←
DIGITAL YNR	USED(3D)	NOT USED	←
DIGITAL CNR	USED(3D)	USED(2D)	←
DIGITAL S.COLOR	USED(3D)	NOT USED	←
FRONT INPUT	USED[GOLD]	USED[SILVER]	←
REAR S(4PIN) OUTPUT	USED	NOT USED	←
REMOTE PAUSE TERMINAL	USED	NOT USED	←
x1.5 PB w/AUDIO	USED	NOT USED	←
BROADCASTING STANDARD	B/G,D/K	B/G,D/K	L,L',B/G
STEREO DECODER	NICAM/A2	←	NICAM(L,B/G)/A2(B/G)
RF OUT	USED	←	NOT USED
VPS(AUTO)	USED	←	NOT USED
OSD LANGUAGE	13 LANGUAGES	←	FRENCH

Notes: Mark ← is same as left.

SECTION 3 ADJUSTMENT

3.1 Electrical adjustment

3.1.1 PAL/SECAM converter circuit [EF MODEL]

Note:

- Unless otherwise specified in this P/S Converter circuit adjustments, all measuring points and adjustment parts are located on the S-P Converter board.

3.1.1.1 Colour difference level

Signal (A1)	• Color (colour) bar signal [SECAM]
Mode (B)	• EE
Equipment (C)	• Oscilloscope
Measuring point (D)	• CN1601 Pin 7
Adjustment part (F1)	• VR1602 (B-Y ADJ)
(F2)	• VR1601 (R-Y ADJ)
Specified value (G1)	• 460 ± 20 mVp-p (B-Y)
(G2)	• 620 ± 20 mVp-p (R-Y)

- (1) Observe the C (converted colour) waveform at the measuring point (D).
- (2) Adjust the adjustment part (F1) so that the higher level of the Yellow and Blue of the C waveform becomes the specified value (G1).
- (3) Adjust the adjustment part (F2) so that the higher level of the Green and Magenta of the C waveform becomes the specified value (G2).

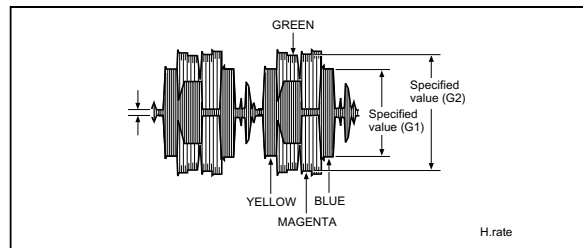


Fig. 3-1-1-1a Colour difference level

3.1.1.2 SECAM burst position

Signal (A1)	• Ext. input
(A2)	• Color (colour) bar signal [SECAM]
Mode (B)	• EE
Equipment (C)	• Oscilloscope
Measuring point (D1)	• CN1601 Pin 7
(D2)	• CN1601 Pin 3
Adjustment part (F)	• VR1603
Specified value (G)	• $Tr = 5.6 \pm 0.1$ μ sec

- (1) Observe the waveforms appeared at the measuring points (D1) and (D2).
- (2) Adjust the adjustment part (F) so that the waveforms timing width between the H-SYNC and the colour burst signal becomes the specified value (G).

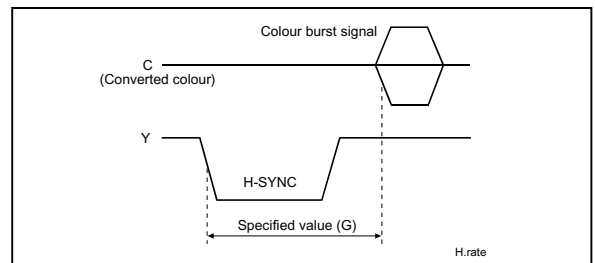


Fig. 3-1-1-2a SECAM burst position



JVC

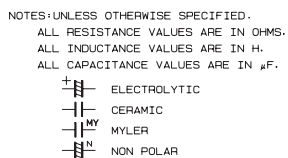
VICTOR COMPANY OF JAPAN, LIMITED
AV & MULTIMEDIA COMPANY. 12,3-chome,Moriya-cho,Kanagawa-ku,Yokohama,Kanagawa-prefecture,221-8528,Japan



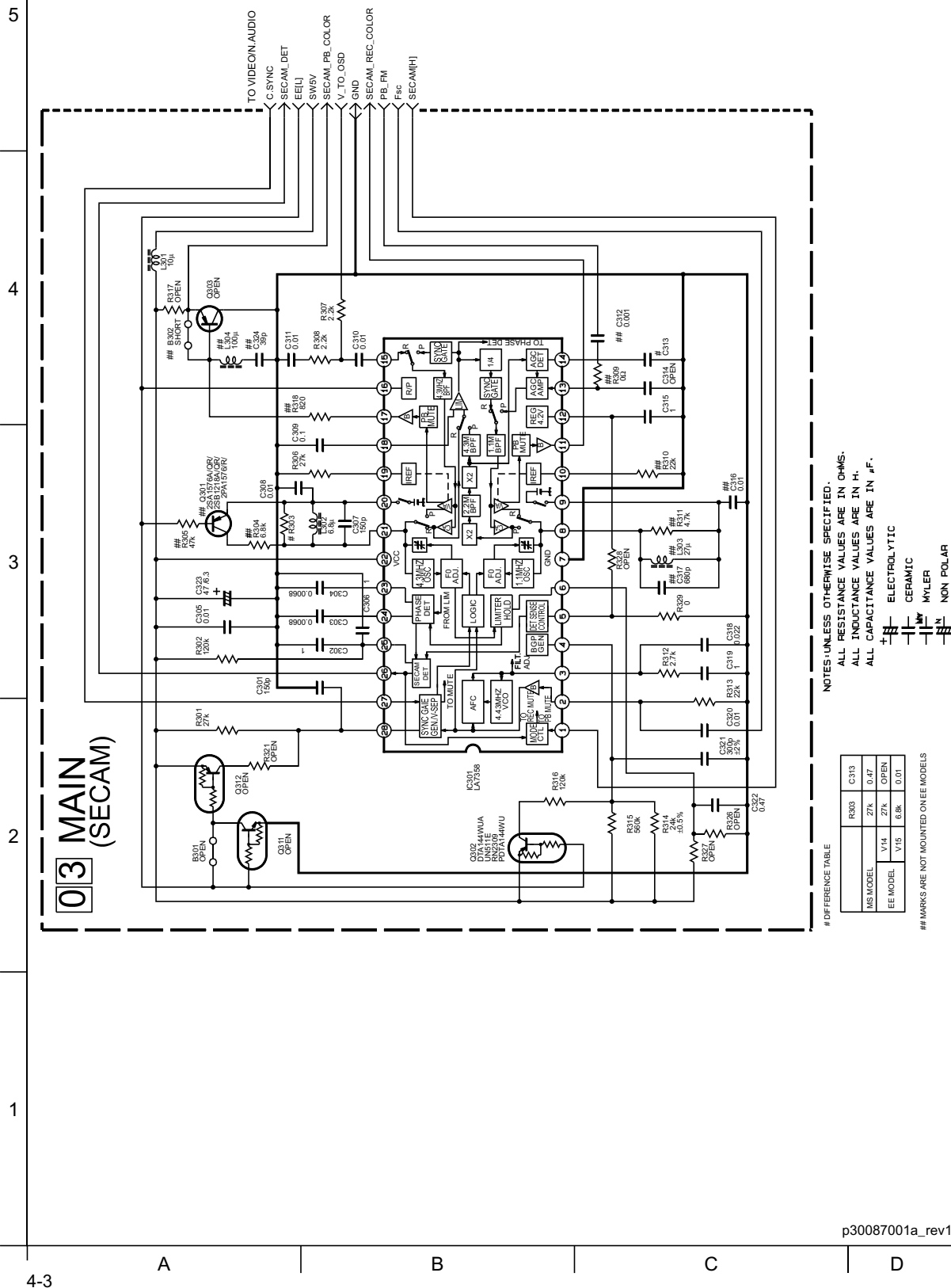
Printed in Japan
0307 VP

4.1 S-P CONVERTER SCHEMATIC DIAGRAM [EF MODEL]

87



4.2 MAIN(SECAM) SCHEMATIC DIAGRAM [EF MODEL]

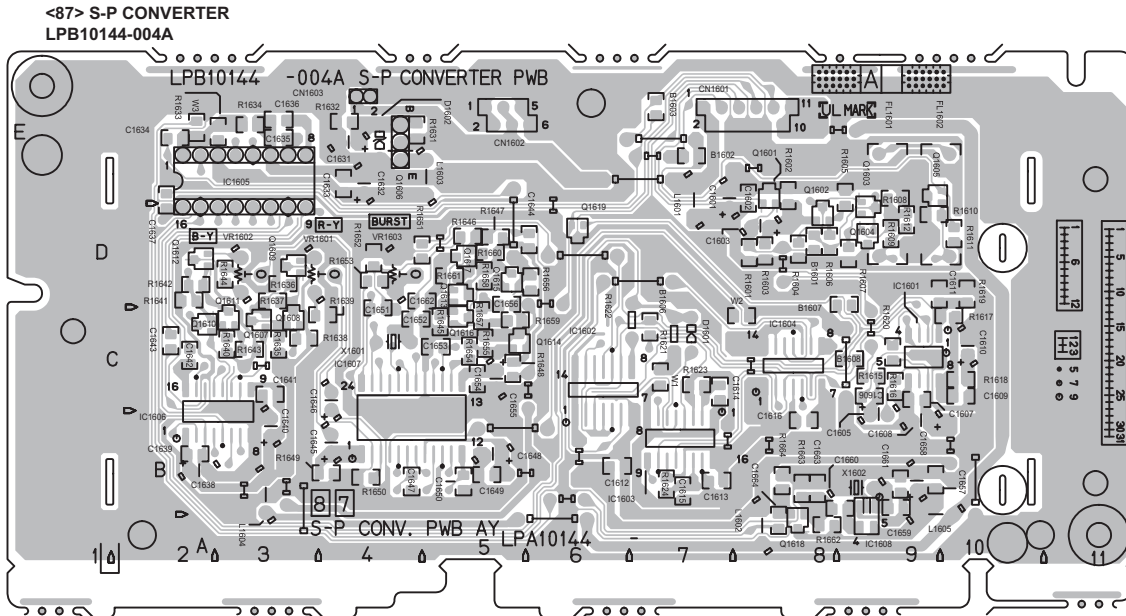


NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.

		R303	C313
	MS MODEL	27k	0.47
	EE MODEL	27k	OPEN
		V14	
		V15	0.01

MARKS ARE NOT MOUNTED ON EE MODELS

4.3 S-P CONVERTER CIRCUIT BOARD [EF MODEL]



COMPONENT PARTS LOCATION GUIDE <S-P CONVERTER> LPB10144-004A

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR		C1647	B C 4B	IC1604	B C 8C	Q1619	B C 6D	R1638	B C 3C	VR1602	A D 3D
C1601	A D 7D	C1648	A D 5B	IC1605	A D 2E	RESISTOR	R1639	B C 4C	VR1603	A D 4D	
C1602	B C 8D	C1649	B C 5B	IC1606	B C 3B		R1640	B C 3C	X1601	A D 4C	
C1603	A D 8D	C1650	B C 5B	IC1607	B C 4B		R1601	B C 8D	R1641	B C 2C	
C1605	A D 9B	C1651	B C 4C	IC1608	B C 9A		R1602	B C 8D	R1642	B C 2D	
C1606	B C 9B	C1652	B C 4C	COIL	L1603		B C 8D	R1603	B C 8D	R1643	B C 3C
C1607	B C 9B	C1653	B C 5C		L1604		B C 8D	R1604	B C 8D	R1644	B C 3D
C1608	A D 9B	C1654	B C 5C		L1601		A D 7E	R1605	B C 9D	R1645	B C 5C
C1609	B C 10B	C1655	A D 5C		L1602		A D 8A	R1606	B C 8D	R1646	B C 5D
C1610	A D 10C	C1656	B C 5C		L1603		A D 5E	R1607	B C 9D	R1647	B C 5D
C1611	B C 9C	C1657	B C 9B		L1604		A D 3B	R1608	B C 9D	R1648	B C 5C
C1612	B C 6B	C1658	A D 9B		L1605	A D 10A	R1609	B C 9D	R1649	B C 4B	
C1613	B C 7B	C1659	B C 9A		TRANSISTOR	R1610	B C 9D	R1650	B C 4B		
C1614	B C 7B	C1660	B C 9A			R1611	B C 10D	R1651	B C 5D		
C1615	B C 7B	C1661	B C 9B			R1612	B C 9D	R1652	B C 4D		
C1616	B C 8B	C1662	B C 5C	R1615		B C 9C	R1653	B C 4D			
C1631	A D 4E	C1663	B C 8B	R1616		B C 9C	R1654	B C 5C			
C1632	A D 4D	C1664	B C 8A	R1617		B C 10C	R1655	B C 5C			
C1633	B C 4D	CONNECTOR	Q1605	B C 9D		R1618	B C 10C	R1656	B C 6D		
C1634	B C 2E		Q1606	A D 4E		R1619	B C 10C	R1657	B C 5C		
C1635	B C 3E		CN1601	A D 7E		R1620	B C 9C	R1658	B C 5D		
C1636	B C 3E		CN1602	A D 5E		R1621	A D 7C	R1659	B C 5C		
C1637	B C 2D		CN1603	A D 4E	R1622	A D 7C	R1660	B C 5D			
C1638	A D 2B		DIODE	Q1608	B C 3D	R1623	B D 7C	R1661	B C 5D		
C1639	B C 2B			Q1611	B C 3C	R1624	B C 7B	R1662	B C 8A		
C1640	A D 3B			D1601	A D 7C	R1625	B C 4E	R1663	B C 8B		
C1641	B C 3B			D1602	A D 4E	R1626	B C 4E	R1664	B C 8B		
C1642	B C 2C			IC	R1614	B C 5C	R1633	B C 3E	OTHER	FL1601	A D 9D
C1643	B C 2C	Q1615			B C 5D	R1634	B C 3E	FL1602		A D 10E	
C1644	B C 6D	Q1616			B C 5C	R1635	B C 3C	VR1601		A D 3D	
C1645	A D 4B	Q1617			B C 5D	R1636	B C 3D				
C1646	A D 4B	Q1618			B C 8A	R1637	B C 3C				

SECTION 5 PARTS LIST

5.1 EXPLODED VIEW

SAFETY PRECAUTION

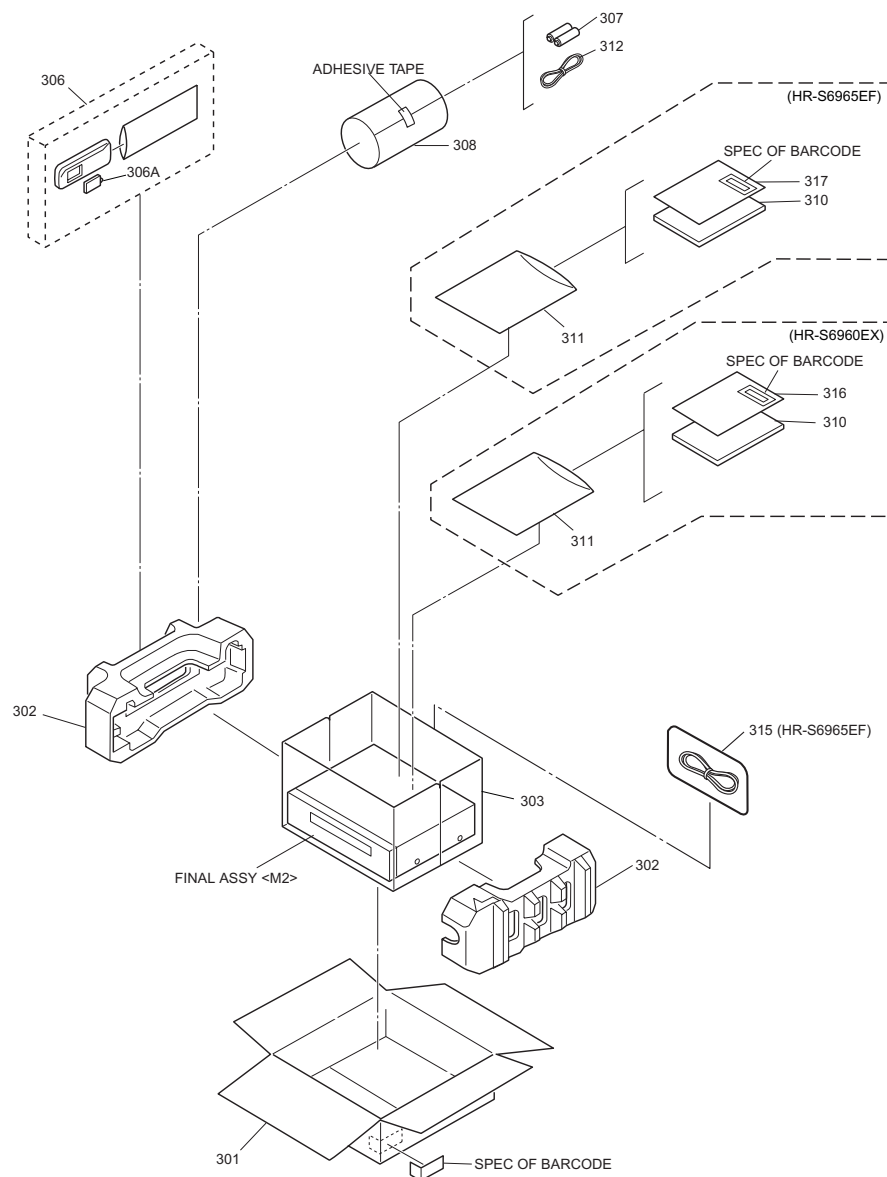
Parts identified by the  symbol are critical for safety. Replace only with specified part numbers.

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

5.1.1 PACKING AND ACCESSORY ASSEMBLY <M1>

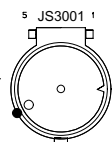
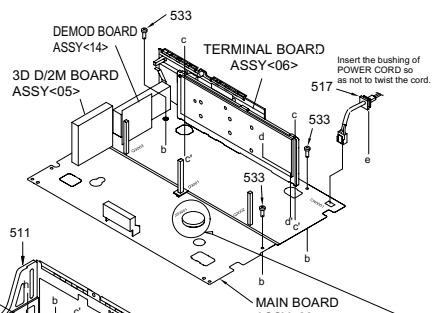
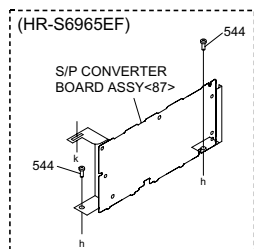
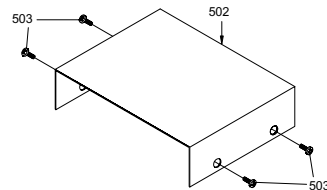
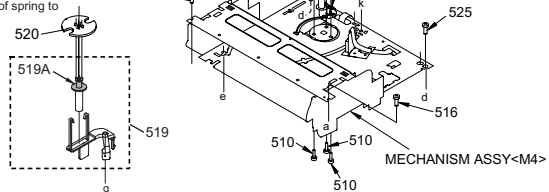
The instruction manual to be provided with this product will differ according to the destination.



5.1.2 FINAL ASSEMBLY <M2>

Hold  part of roller arm ass'y while attaching inertia plate. INERTIA PLATE should be attached so as to ser small diameter of central round hole above.

1. Position roller's installation hole in the "A" part.
2. Insert roller until the "b" part of roller's hook lock up to the "B" part
3. Hitch the "c" part of spring to the "C" part.

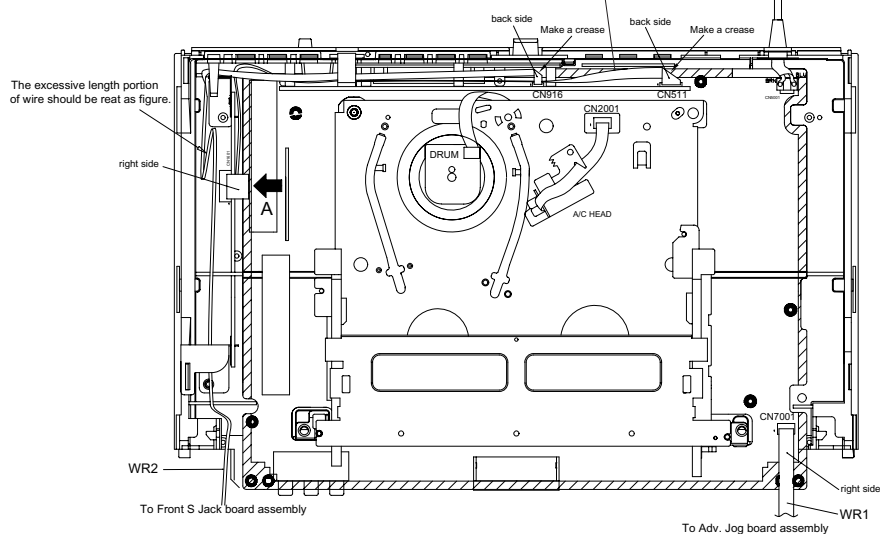
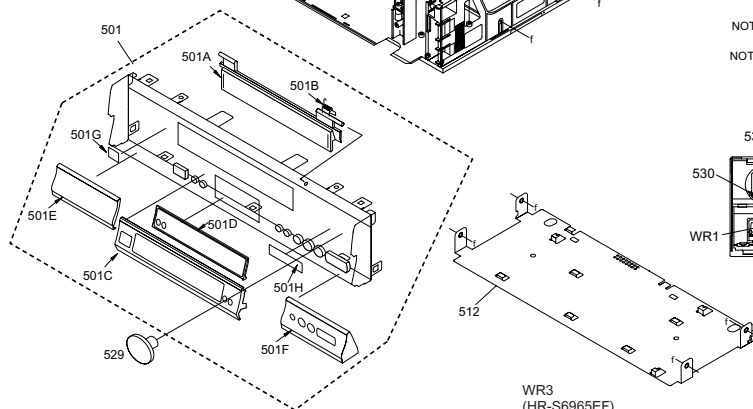
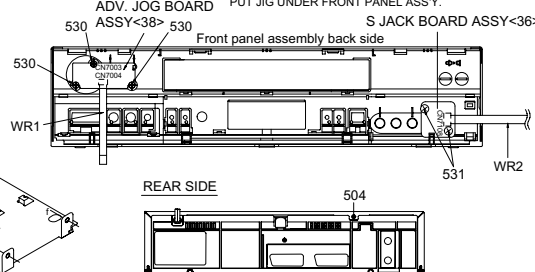


For the prevention of the DRUM FPC damage.
When you attach the Mechanism assembly on Bottom chassis.
Attach the Mechanism assembly after the positioning boss "Z" of the
Bottom chassis is matched to the positioning hole of the Mechanism assembly.

NOTE) INSERT FFC WIRE TO THE CONNECTOR BEFORE ATTACHING JOG/SW PWB TO F.PANEL.

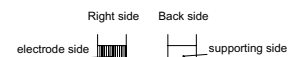
NOTE) INSERT FFC WIRE TO THE CONNECTOR
BEFORE ATTACHING JOG/SW PWB TO F.PANEL.

NOTE) WHEN YOU FIX FRONT S Jack PWB WITH THE SCREW.
ADV. I/O BOARD PUT JIG UNDER FRONT PANEL ASS'Y.

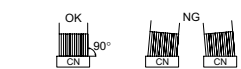


NOTE

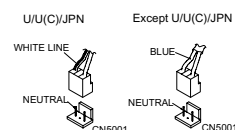
1. Insert direction of FFC WIRE as follows.



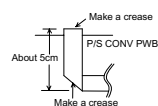
2. FFC WIRE and DRUM FPC WIRE should be insert as follows.



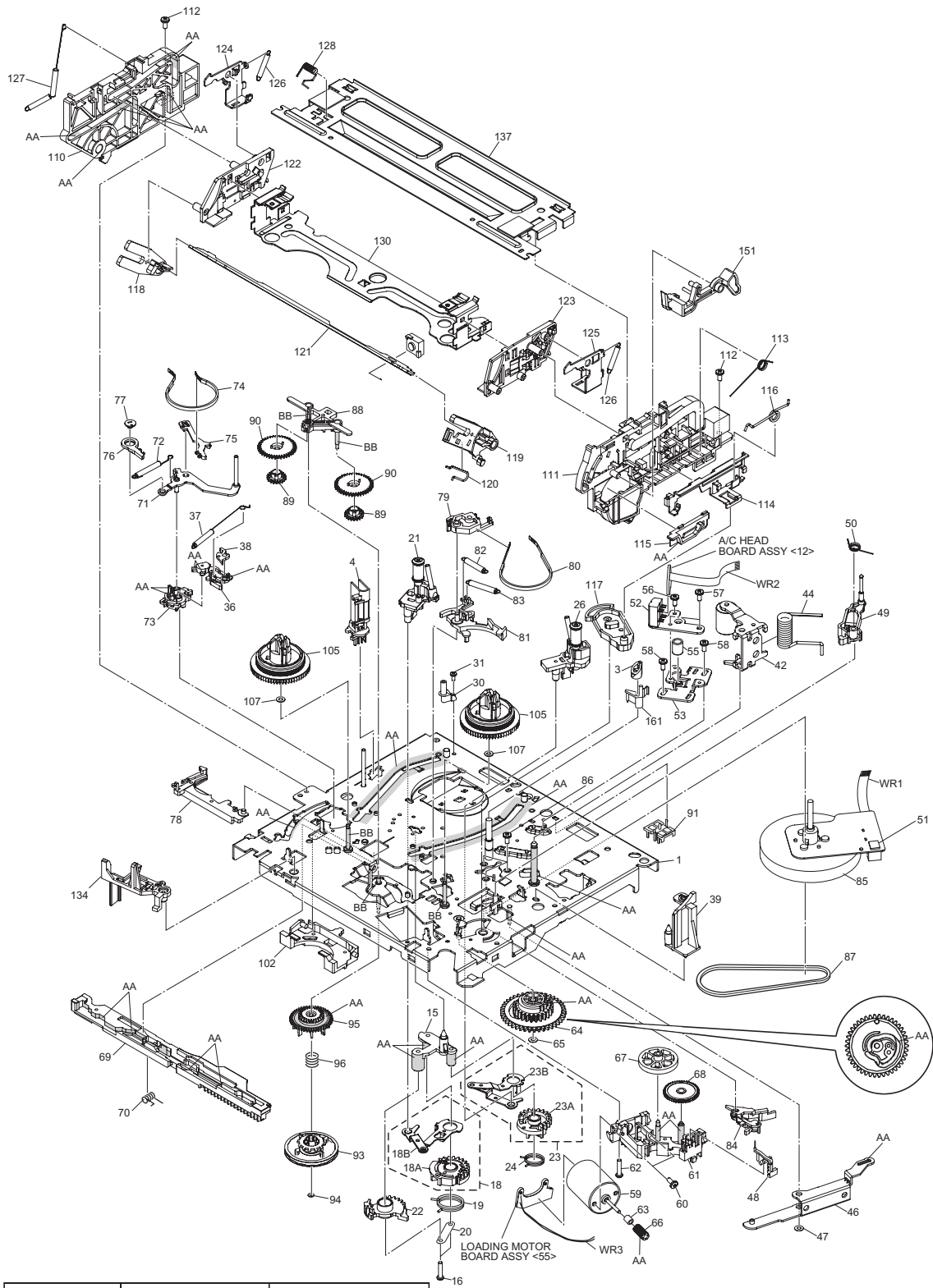
3. Insert direction of POWER CORD.



DETAIL "A"



5.1.3 MECHANISM ASSEMBLY <M4>



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	COSMO-HV56	BB

NOTE:The section marked in **AA** and **BB** indicate lubrication and greasing areas.

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

5.2 PARTS LIST

#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B
------------	----------	------------------------	-----

PACKING AND ACCESSORY ASSEMBLY <M1>

301	LP30855-004B	PACKING CASE	A B
302	LP31187-001A	CUSHION ASSY	A B
303	PQM30021-093	POLY BAG	A B
306	LP20878-016A	REMOTE CTL UNIT	A B
306A	LP40610-003A	COVER(BATTERY)	A B
307	———	BATTERY,X2	A B
308	QPC02202230P	POLY BAG,CABLE	A B
△ 310	LPT0752-001A	INST.BOOK(ENGLISH),FOR EX	A
△ 310	LPT0752-002A	INST.BOOK(GERMANY),FOR EX&EY	A
△ 310	LPT0752-003A	INST.BOOK(FRENCH),FOR EX	A
△ 310	LPT0752-004A	INST.BOOK(DUTCH),FOR EX	A
△ 310	LPT0752-005A	INST.BOOK(SPANISH),FOR EX	A
△ 310	LPT0752-006A	INST.BOOK(ITALIAN),FOR EX	A
△ 310	LPT0752-007A	INST.BOOK(DANISH),FOR EY	A
△ 310	LPT0752-008A	INST.BOOK(FINNISH),FOR EY	A
△ 310	LPT0752-009A	INST.BOOK(SWEDISH),FOR EY	A
△ 310	LPT0752-010A	INST.BOOK(NORWEGIAN),FOR EY	A
△ 310	LPT0752-011A	INST.BOOK(PORTGUESE),FOR EX	A
△ 310	LPT0752-012A	INST.BOOK(GREEK),FOR EX	A
△ 310	LPT0752-013A	INST.BOOK(CZECH),FOR EZ	A
△ 310	LPT0752-014A	INST.BOOK(POLISH),FOR EZ	A
△ 310	LPT0752-015A	INST.BOOK(HUNGARIAN),FOR EZ	A
△ 310	LPT0774-001A	INST.BOOK(FRENCH)	B
311	QPC02503530P	POLY BAG,INST	A B
312	PEAC0300-02	RF CABLE	A B
315	QAM0238-003	PERI CABLE	B
316	BT-54013-6	WARRANTY CARD	A
317	BT-54008-5	GUARANTY CARD	B

FINAL ASSEMBLY <M2>

△ 501	LP10452-026C	F.PANEL ASSY	A
△ 501	LP10452-030C	F.PANEL ASSY	B
501A	LP21123-012B	CASSETTE DOOR	A B
501B	PQ46448	TOR.SPRING	A B
501C	LP21127-011B	COVER(WINDOW)	A B
501D	LP31188-016A	WINDOW(1)	A
501D	LP31188-009A	WINDOW(1)	B
501E	LP31142-012B	DOOR(JACK)	A
501E	LP31142-016B	DOOR(JACK)	B
501F	LP30877-006A	COVER(R)	A B
501G	LP41035-002A	STICKER	A B
501H	LP41035-008A	STICKER	A B
△ 502	LP10013-051C	TOP COVER	A B
503	QYTDSF3010R	TAP SCREW,X4,SIDE	A B
504	QYTDSF3010M	TAP SCREW,REAR	A B
505	PDV2544A	DRUM FINAL ASSY	A B
510	QYSPSPD3008Z	SCREW,X3,DRUM	A B
△ 511	LP10108-016H	BOTTOM CHASSIS	A
△ 511	LP10108-016G	BOTTOM CHASSIS	B
△ 512	LP10014-002C	BOTTOM COVER	A B
515	QYTDSF4012Z	TAP SCREW,FOR MECHA	A B
516	QYSPSFG3010Z	TAP SCREW,X2,FOR MECHA	A B
△ 517	QMP4A10-170	POWER CORD	A B
519	LP40370-001F	ROLLER ARM ASSY	A B

#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B
------------	----------	------------------------	-----

MECHANISM ASSEMBLY <M4>

1	LP21039-001U	MAIN DECK ASSY	A B
3	LP40097-002E	GUIDE POLE CAP	A B
4	QAH0082-001	FULL ERASE HEAD	A B
15	LP30958-001B	LOAD.GEAR BASE	A B
16	QYTPT2620Z	TAP SCREW,X2,L.G.BASE	A B
18	LP40798-001A	LOAD.GEAR(SUPPLY) ASSY	A B
18A	LP21040-001A	LOAD.GEAR(SUPPLY)	A B
18B	LP40799-001A	LOAD.ARM(SUPPLY) ASSY	A B
19	LP40837-001A	TORSION SPRING(S),L.GEAR(S)	A B
20	LP40903-002B	FIXING PLATE	A B
21	LP40806-001D	POLE BASE ASSY(SUPPLY)	A B
22	LP30959-002B	LOAD GEAR	A B
23	LP40802-001C	LOAD.GEAR(TAKE UP) ASSY	A B
23A	LP21041-001D	LOAD.GEAR(TAKE UP)	A B
23B	LP40803-001A	LOAD.ARM(TAKE UP) ASSY	A B
24	LP40838-001A	TORSION SPRING(T),L.GEAR(T)	A B
26	LP40808-001E	POLE BASE ASSY(TAKE UP)	A B
30	LP31020-004B	ARM BASE	A B
31	QYTDSF2606Z	TAP SCREW	A B
36	LP21055-001F	TU LEVER	A B
37	LP40943-001A	TENSION SPRING	A B
38	LP40859-001D	T-UP HEAD	A B
39	LP30961-001C	LID GUIDE	A B
42	LP40810-001B	PINCH ROLLER ARM ASSY	A B
44	LP40840-001D	TORSION SPRING,P.ROLLER	A B
46	LP30963-001B	PRESS LEVER	A B
47	PQM30017-24	SLIT WASHER,P.LEVER	A B
48	LP40930-002E	S-SWITCH	A B
49	LP40813-001D	GUIDE ARM ASSY	A B
50	LP40841-001A	TORSION SPRING,G.ARM	A B
51	LP30002-090A	SPACER,CAPSTAN MOTOR	A B
52	QAH0081-001	AC HEAD	A B
53	LP30965-001A	HEAD BASE	A B
55	LP40842-001D	COMPRESSION SPRING	A B
56	QYTDSF2006M	TAP SCREW,A/C HEAD	A B
57	LP41036-001A	A/C ADJ.SCREW,X2,A/C HEAD	A B
58	QYTDSF2606Z	TAP SCREW,X2,A/C HEAD	A B
59	QAR0023-001	LOADING MOTOR	A B
60	QYTSP3003Z	SCREW,X2,L.MOTOR	A B
61	LP21056-002J	MOTOR BRACKET	A B
62	QYTPT2620Z	TAP SCREW,M.BKT	A B
63	LP40814-001B	WORM BEARING	A B
64	LP21044-001E	CONTROL CAM	A B
65	PQM30017-24	SLIT WASHER,CTL.CAM	A B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B
66	LP40815-001A	WORM GEAR	A B
67	LP40816-001B	HELICAL GEAR,M.BKT	A B
68	LP40817-001A	CONNECT GEAR	A B
69	LP10400-001J	CONTROL PLATE	A B
70	LP40843-001A	TORSION SPRING	A B
71	LP40818-001B	TENSION ARM ASSY	A B
72	LP40844-001E	TENSION SPRING,T.ARM	A B
73	LP21045-001D	TENSION ARM BASE	A B
74	LP40821-001A	TENSION BAND ASSY	A B
75	LP30967-001B	BAND HOLDER-1	A B
76	LP30968-001C	BAND HOLDER-2	A B
77	LP40822-002B	ADJUST PIN	A B
78	LP31000-005E	TENSION ARM LEVER	A B
79	LP21046-001C	MAIN BRAKE(TAKE UP)	A B
80	LP40824-001A	BAND BRAKE ASSY	A B
81	LP30969-002B	BRAKE LEVER	A B
82	LP30003-033B	TENSION SPRING,BRK LEVER	A B
83	LP30003-035B	TENSION SPRING,BRK LEVER	A B
84	LP40825-001B	CAPSTAN BRAKE ASSY	A B
△ 85	QAR0224-002	CAPSTAN MOTOR	A B
86	QYTPSG2606Z	TAP SCREW,X3,CAP.MOTOR	A B
87	LP30005-010A	BELT,CAPSTAN MOTOR	A B
88	LP30970-001A	IDLER ARM	A B
89	LP40828-004A	IDLER GEAR 1,X2	A B
90	LP40829-001B	IDLER GEAR 2,X2	A B
91	LP31014-001A	WIRE HOLDER	A B
93	LP40934-001B	CLUTCH UNIT	A B
94	PQM30017-47	SLIT WASHER,CLUT.UNIT	A B
95	LP30973-001A	DIRECT GEAR	A B
96	LP40939-001A	COMPRESION SPRING,DIR.GEAR	A B
102	LP30974-001C	CHANGE LEVER	A B
105	LP21049-001A	REEL DISK,X2	A B
107	LP30017-004A	SPACER,X2,REEL DISK	A B
110	LP10401-001H	SIDE FRAME(L)	A B
111	LP10402-001K	SIDE FRAME(R)	A B
112	QYTDST2606Z	TAP SCREW,X2,FOR MECHA	A B
113	LP40917-001D	TORSION SPRING,FOR DUMP.	A B
114	LP30976-001E	SIDE PLATE	A B
115	LP30977-002D	LIMIT PLATE	A B
116	LP40846-001C	LIMIT SPRING,SIDE PLATE	A B
117	LP31100-001B	DRIVE LEVER	A B
118	LP30978-001B	DRIVE ARM(L)	A B
119	LP30979-001P	DRIVE ARM(R)	A B
120	LP40847-001B	TORSION SPRING,D.ARM(R)	A B
121	LP30980-001E	CONNECT PLATE	A B
122	LP10403-001C	SIDE HOLDER(L)	A B
123	LP10404-001E	SIDE HOLDER(R)	A B
124	LP30983-001B	LOCK LEVER(L)	A B
125	LP30984-001B	LOCK LEVER(R)	A B
126	LP40924-001D	TENSION SPRING,X2,L.LEVER	A B
127	LP40972-001A	EARTH SPRING(1)	A B
128	LP40857-001B	EARTH SPRING(2),TOP FRAME	A B
130	LP30981-001G	CASSETTE HOLDER ASSY	A B
134	LP21051-002C	REC SAFETY LEVER	A B
137	LP21052-001J	TOP FRAME	A B
151	LP30985-001G	DOOR OPENER,SIDE FRM(R)	A B
161	LP40993-001A	TAPE GUIDE	A B
WR1	WJT0059-001D	E-CARD WIRE,CAP MOTOR	A B
WR2	WJT0067-001B	E-CARD WIRE,A/C HEAD	A B
WR3	WJS0022-001A	E-FL/RB WIRE,L.MOTOR	A B

#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B

MAIN BOARD ASSEMBLY <03>			
PW1 MAIN BOARD ASS'Y<03> includes the parts shown in the following.			
PW1 2D DIGITAL BOARD ASS'Y<05>			
PW1 TERMINAL BOARD ASS'Y<06>			
PW1 DEMOD BOARD ASS'Y<14>			
PW1	LPA10170-10B	MAIN BOARD ASSY,HR-S6960EX	A
PW1	LPA10170-13B	MAIN BOARD ASSY,HR-S6965EF	B
IC1	JCP8051-MSA	IC,VIDEO	A B
IC201	LC74776-9791	IC	A B
IC301	LA7358	IC	B
IC2201	AN3651FBP	IC	A B
IC3001	HD6432194SBD35F	IC(MCU),MAIN CPU	A
IC3001	HD6432194SAD36F	IC(MCU),MAIN CPU	B
IC3001 or	HD64F2194CFD35	IC(MCU),MAIN CPU	A
IC3001 or	HD64F2194CFD36	IC(MCU),MAIN CPU	B
IC3002	IC-PST3427U-X	IC,RESET	A B
IC3003	*(REFER TO BELOW)	IC,EEPROM(32K)	A B
IC7002	GP1UM291QK	IR DETECT UNIT	A B
Q1	2SC4081/QRS/-X	TRANSISTOR,SP1 SHORT	A B
Q1 or	2PC4081/R/-X	TRANSISTOR	A B
Q2	2SC4081/QRS/-X	TRANSISTOR,SP2 SHORT	A B
Q2 or	2PC4081/R/-X	TRANSISTOR	A B
Q3	2SC4081/QRS/-X	TRANSISTOR,EP1 SHORT	A B
Q3 or	2PC4081/R/-X	TRANSISTOR	A B
Q4	2SC4081/QRS/-X	TRANSISTOR,EP2 SHORT	A B
Q4 or	2PC4081/R/-X	TRANSISTOR	A B
Q7	2SC4081/QRS/-X	TRANSISTOR,RF EQ(S)	A B
Q7 or	2PC4081/R/-X	TRANSISTOR	A B
Q8	2SC4081/QRS/-X	TRANSISTOR,RF EQ(S)	A B
Q8 or	2PC4081/R/-X	TRANSISTOR	A B
Q9	2SA1576A/QR/-X	TRANSISTOR,RF EQ(S)	A B
Q9 or	2PA1576/R/-X	TRANSISTOR	A B
Q10	2SA1576A/QR/-X	TRANSISTOR,FSC BUF	A B
Q10 or	2PA1576/R/-X	TRANSISTOR	A B
Q11	DTC144WUA-X	DIGI TRANSISTOR,R-Y REV	A B
Q11 or	UN521E-X	DIGI TRANSISTOR	A B
Q11 or	RN1309-X	DIGI TRANSISTOR	A B
Q11 or	PDTC144WU-X	DIGI TRANSISTOR	A B
Q14	2SA1576A/QR/-X	TRANSISTOR,SECAM REC	B
Q14 or	2PA1576/R/-X	TRANSISTOR,S	B
Q14 or	2SB1218A/QR/-X	TRANSISTOR,S	B
Q16	DTC144WUA-X	DIGI TRANSISTOR,DEMP(SP/EP	A B
Q16 or	UN521E-X	DIGI TRANSISTOR	A B
Q16 or	RN1309-X	DIGI TRANSISTOR	A B
Q16 or	PDTC144WU-X	DIGI TRANSISTOR	A B
Q18	DTC144WUA-X	DIGI TRANSISTOR,SECAM	B
Q18 or	UN521E-X	DIGI TRANSISTOR	B
Q18 or	RN1309-X	DIGI TRANSISTOR	B
Q18 or	PDTC144WU-X	DIGI TRANSISTOR	B
Q19	DTC144WUA-X	DIGI TRANSISTOR,SECAM	B
Q19 or	UN521E-X	DIGI TRANSISTOR	B
Q19 or	RN1309-X	DIGI TRANSISTOR	B
Q19 or	PDTC144WU-X	DIGI TRANSISTOR	B
Q21	2SA1576A/QR/-X	TRANSISTOR,PB C BUF	A B
Q21 or	2PA1576/R/-X	TRANSISTOR	A B
Q24	2SA1576A/QR/-X	TRANSISTOR,2FSC BUF	A B
Q24 or	2PA1576/R/-X	TRANSISTOR	A B

* S6960EX : LPN0797-003B-01 The VCR goes to jig RCU mode after replacing the EEPROM and the VCR does not accept some RCU command.
S6965EF : LPN0798-002B-81 Therefore please set the VCR to the user RCU mode after replacing the EEPROM.
The method of setting the VCR to the user RCU mode is written on the service manual.

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B
Q38	2SC4081/QRS/-X	TRANSISTOR,Y BDL	A B	Q2202 or	PDTC144WU-X	DIGI TRANSISTOR	A B
Q38 or	2PC4081/R/-X	TRANSISTOR	A B	Q2202 or	UN521E-X	DIGI TRANSISTOR	A B
Q40	DTC144WUA-X	DIGI TRANSISTOR,R-Y REV	A B	Q2202 or	RN1309-X	DIGI TRANSISTOR	A B
Q40 or	UN521E-X	DIGI TRANSISTOR	A B	Q2203	2SC4081/QRS/-X	TRANSISTOR	A B
Q40 or	RN1309-X	DIGI TRANSISTOR	A B	Q2203 or	2PC4081/R/-X	TRANSISTOR	A B
Q40 or	PDTC144WU-X	DIGI TRANSISTOR	A B	Q2203 or	2SD1819A/QRS/-X	TRANSISTOR	A B
Q41	DTC144WUA-X	DIGI TRANSISTOR,MESECAM	A B	Q2204	2SC4081/QRS/-X	TRANSISTOR	A B
Q41 or	UN521E-X	DIGI TRANSISTOR	A B	Q2204 or	2PC4081/R/-X	TRANSISTOR	A B
Q41 or	RN1309-X	DIGI TRANSISTOR	A B	Q2204 or	2SD1819A/QRS/-X	TRANSISTOR	A B
Q41 or	PDTC144WU-X	DIGI TRANSISTOR	A B	Q2251	DTC144WUA-X	DIGI TRANSISTOR	A B
Q50	DTC144WUA-X	DIGI TRANSISTOR,EE(L)	A B	Q2251 or	PDTC144WU-X	DIGI TRANSISTOR	A B
Q50 or	UN521E-X	DIGI TRANSISTOR	A B	Q2251 or	UN521E-X	DIGI TRANSISTOR	A B
Q50 or	RN1309-X	DIGI TRANSISTOR	A B	Q2251 or	RN1309-X	DIGI TRANSISTOR	A B
Q50 or	PDTC144WU-X	DIGI TRANSISTOR	A B	Q2252	DTC144WUA-X	DIGI TRANSISTOR	A B
Q207	2SA1576A/QR/-X	TRANSISTOR,OSD OUT	A B	Q2252 or	PDTC144WU-X	DIGI TRANSISTOR	A B
Q207 or	2PA1576/R/-X	TRANSISTOR,OSD OUT	A B	Q2252 or	UN521E-X	DIGI TRANSISTOR	A B
Q208	2SC4081/QRS/-X	TRANSISTOR,OSD OUT	A B	Q2252 or	RN1309-X	DIGI TRANSISTOR	A B
Q208 or	2PC4081/R/-X	TRANSISTOR,OSD OUT	A B	Q2253	DTC144WUA-X	DIGI TRANSISTOR	A B
Q301	2SB1218A/QR/-X	TRANSISTOR	B	Q2253 or	PDTC144WU-X	DIGI TRANSISTOR	A B
Q301 or	2SA1576A/QR/-X	TRANSISTOR	B	Q2253 or	UN521E-X	DIGI TRANSISTOR	A B
Q301 or	2PA1576/R/-X	TRANSISTOR	B	Q2253 or	RN1309-X	DIGI TRANSISTOR	A B
Q302	UN511E-X	DIGI TRANSISTOR	B	Q2254	DTC114EUA-X	DIGI TRANSISTOR	A B
Q302 or	DTA144WUA-X	DIGI TRANSISTOR	B	Q2254 or	PDTC114EU-X	DIGI TRANSISTOR	A B
Q302 or	RN2309-X	D TRANSISTOR	B	Q2254 or	UN5211-X	DIGI TRANSISTOR	A B
Q302 or	PDTA144WU-X	DIGI TRANSISTOR	B	Q2254 or	RN1302-X	DIGI TRANSISTOR	A B
Q2001	2SC4081/QRS/-X	TRANSISTOR	A B	Q2255	DTC114EUA-X	DIGI TRANSISTOR	A B
Q2001 or	2SD1819A/QRS/-X	TRANSISTOR	A B	Q2255 or	PDTC114EU-X	DIGI TRANSISTOR	A B
Q2001 or	2PC4081/R/-X	TRANSISTOR	A B	Q2255 or	UN5211-X	DIGI TRANSISTOR	A B
Q2002	2SC4081/QRS/-X	TRANSISTOR	A B	Q2255 or	RN1302-X	DIGI TRANSISTOR	A B
Q2002 or	2SD1819A/QRS/-X	TRANSISTOR	A B	Q3002	PTZ-NV16A	IC(PHOTO SENSOR),STA.SENSOR	A B
Q2002 or	2PC4081/R/-X	TRANSISTOR	A B	Q3003	PTZ-NV16A	IC(PHOTO SENSOR),END SENSOR	A B
Q2003	DTA144WUA-X	DIGI TRANSISTOR	A B	Q3004	2SD1819A/QRS/-X	TRANSISTOR,POWER DET	A B
Q2003 or	UN511E-X	DIGI TRANSISTOR	A B	Q3004 or	2SC4081/QRS/-X	TRANSISTOR,POWER DET	A B
Q2003 or	RN2309-X	D TRANSISTOR	A B	Q3004 or	2PC4081/R/-X	TRANSISTOR,POWER DET	A B
Q2003 or	PDTA144WU-X	DIGI TRANSISTOR	A B	Q3005	2SD1819A/QRS/-X	TRANSISTOR,SVCC	A B
Q2004	DTC144WUA-X	DIGI TRANSISTOR	A B	Q3005 or	2SC4081/QRS/-X	TRANSISTOR,SVCC	A B
Q2004 or	PDTC144WU-X	DIGI TRANSISTOR	A B	Q3005 or	2PC4081/R/-X	TRANSISTOR,SVCC	A B
Q2004 or	UN521E-X	DIGI TRANSISTOR	A B	Q3007	UN521E-X	DIGI TRANSISTOR,P50	A B
Q2004 or	RN1309-X	DIGI TRANSISTOR	A B	Q3007 or	DTC144WUA-X	DIGI TRANSISTOR,P50	A B
Q2051	2SC4081/QRS/-X	TRANSISTOR	A B	Q3007 or	PDTC144WU-X	DIGI TRANSISTOR,P50	A B
Q2051 or	2SD1819A/QRS/-X	TRANSISTOR	A B	Q3007 or	RN1309-X	DIGI TRANSISTOR,P50	A B
Q2051 or	2PC4081/R/-X	TRANSISTOR	A B	Q4001	UN5211-X	DIGI TRANSISTOR	A B
Q2052	2SA1576A/QR/-X	TRANSISTOR	A B	Q4001 or	DTC114EUA-X	DIGI TRANSISTOR	A B
Q2052 or	2SB1218A/QR/-X	TRANSISTOR	A B	Q4001 or	RN1302-X	DIGI TRANSISTOR	A B
Q2052 or	2PA1576/R/-X	TRANSISTOR	A B	Q4001 or	PDTC114EU-X	DIGI TRANSISTOR	A B
Q2053	DTC144WUA-X	DIGI TRANSISTOR	A B	Q5101	2SK2632-CB14	POWER MOS FET	A B
Q2053 or	UN521E-X	DIGI TRANSISTOR	A B	Q5101 or	2SK2129-LT	POWER MOS FET	A B
Q2053 or	RN1309-X	DIGI TRANSISTOR	A B	Q5101 or	2SK2632	POWER MOS FET	A B
Q2053 or	PDTC144WU-X	DIGI TRANSISTOR	A B	Q5101 or	2SK2129	POWER MOS FET	A B
Q2054	2SA1576A/QR/-X	TRANSISTOR	A B	Q5102	2SD2144S/UV/-T	TRANSISTOR	A B
Q2054 or	2SB1218A/QR/-X	TRANSISTOR	A B	Q5301	2SC1740S/RS/-T	TRANSISTOR	A B
Q2054 or	2PA1576/R/-X	TRANSISTOR	A B	Q5301 or	2SC3199/YG/-T	TRANSISTOR	A B
Q2055	DTC144WUA-X	DIGI TRANSISTOR	A B	Q5303	2SC5739/QP/-	POW TRANSISTOR,SW5V	A B
Q2055 or	UN521E-X	DIGI TRANSISTOR	A B	Q5304	2SD2144S/UV/-T	TRANSISTOR,SW12V	A B
Q2055 or	RN1309-X	DIGI TRANSISTOR	A B	Q5305	DTA114EUA-X	DIGI TRANSISTOR,SW12V	A B
Q2055 or	PDTC144WU-X	DIGI TRANSISTOR	A B	Q5305 or	UN5111-X	DIGI TRANSISTOR,SW12V	A B
Q2201	DTA144WUA-X	DIGI TRANSISTOR	A B	Q5305 or	RN2302-X	D TRANSISTOR,SW12V	A B
Q2201 or	PDTA144WU-X	DIGI TRANSISTOR	A B	Q5305 or	PDTA114EU-X	DIGI TRANSISTOR,SW12V	A B
Q2201 or	UN511E-X	DIGI TRANSISTOR	A B	Q5306	DTC114EUA-X	DIGI TRANSISTOR,SW12V	A B
Q2201 or	RN2309-X	D TRANSISTOR	A B	Q5306 or	UN5211-X	DIGI TRANSISTOR,SW12V	A B
Q2202	DTC144WUA-X	DIGI TRANSISTOR	A B	Q5306 or	RN1302-X	DIGI TRANSISTOR,SW12V	A B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B
Q5306	or PDTC114EU-X	DIGI TRANSISTOR,SW12V	A B	D3004	or 1A3G-T2	SI DIODE,BU5V	A B
Q5307	2SD2144S/UV/-T	TRANSISTOR,RF5V	A B	D3005	11ES2-T2	SI DIODE,AL5V	A B
Q6030	2SB1218A/QR/-X	TRANSISTOR,V BUFF	A B	D3005	or 1A3G-T2	SI DIODE,AL5V	A B
Q6030	or 2SA1576A/QR/-X	TRANSISTOR	A B	D3008	1SS355-X	SI DIODE,P50	A B
Q6030	or 2PA1576R/-X	TRANSISTOR	A B	D4001	QUY153-050Y	IM BUS WIRE	A B
Q6031	DTC114EUA-X	DIGI TRANSISTOR	A B	D4002	QUY153-050Y	IM BUS WIRE	A B
Q6031	or UN5211-X	DIGI TRANSISTOR	A B	D5001	S1WB/A/60-4102	BRIDGE DIODE	A B
Q6031	or RN1302-X	DIGI TRANSISTOR	A B	D5001	or S1WB/A/60-X	BRIDGE DIODE	A B
Q6031	or PDTC114EU-X	DIGI TRANSISTOR	A B	D5001	or S1WB(A)60F4072X	BRIDGE DIODE	A B
Q6032	DTC114EUA-X	DIGI TRANSISTOR	A B	D5101	AU01-T2	SI DIODE	A B
Q6032	or UN5211-X	DIGI TRANSISTOR	A B	D5101	or 1SR153-400-T2	FR DIODE	A B
Q6032	or RN1302-X	DIGI TRANSISTOR	A B	D5101	or ERA18-04-T2	FR DIODE	A B
Q6032	or PDTC114EU-X	DIGI TRANSISTOR	A B	D5101	or 10ELS4-T2	FR DIODE	A B
Q7001	2SB1218A/QR/-X	TRANSISTOR	A B	D5102	AU01-T2	SI DIODE	A B
Q7001	or 2SA1576A/QR/-X	TRANSISTOR	A B	D5102	or 1SR153-400-T2	FR DIODE	A B
Q7001	or 2PA1576R/-X	TRANSISTOR	A B	D5102	or ERA18-04-T2	FR DIODE	A B
Q7002	2SB1218A/QR/-X	TRANSISTOR	A B	D5102	or 10ELS4-T2	FR DIODE	A B
Q7002	or 2SA1576A/QR/-X	TRANSISTOR	A B	D5103	1SS133-T2	SI DIODE	A B
Q7002	or 2PA1576R/-X	TRANSISTOR	A B	D5103	or 1SS270A-T2	SI DIODE	A B
Q7003	2SB1218A/QR/-X	TRANSISTOR	A B	D5105	1SS133-T2	SI DIODE	A B
Q7003	or 2SA1576A/QR/-X	TRANSISTOR	A B	D5105	or 1SS270A-T2	SI DIODE	A B
Q7003	or 2PA1576R/-X	TRANSISTOR	A B	D5203	AU01Z-T2	FR DIODE	A B
Q7004	2SB1218A/QR/-X	TRANSISTOR	A B	D5203	or 10ELS2-T2	FR DIODE	A B
Q7004	or 2SA1576A/QR/-X	TRANSISTOR	A B	D5204	AU01Z-T2	FR DIODE	A B
Q7004	or 2PA1576R/-X	TRANSISTOR	A B	D5204	or 10ELS2-T2	FR DIODE	A B
Q7005	2SB1218A/QR/-X	TRANSISTOR	A B	D5207	AK04-T2	SB DIODE,6V	A B
Q7005	or 2SA1576A/QR/-X	TRANSISTOR	A B	D5207	or 11EQS04-T2	SB DIODE,6V	A B
Q7005	or 2PA1576R/-X	TRANSISTOR	A B	D5207	or 1S4-T2	SB DIODE,6V	A B
Q7006	2SB1218A/QR/-X	TRANSISTOR,V15 7SEG	A B	D5207	or SBO40-T2	SB DIODE,6V	A B
Q7006	or 2SA1576A/QR/-X	TRANSISTOR	A B	D5209	AK04-T2	SB DIODE,6V	A B
Q7006	or 2PA1576R/-X	TRANSISTOR	A B	D5209	or 11EQS04-T2	SB DIODE,6V	A B
Q7007	2SB1218A/QR/-X	TRANSISTOR,V15 7SEG	A B	D5209	or 1S4-T2	SB DIODE,6V	A B
Q7007	or 2SA1576A/QR/-X	TRANSISTOR	A B	D5209	or SBO40-T2	SB DIODE,6V	A B
Q7007	or 2PA1576R/-X	TRANSISTOR	A B	D5210	AU01Z-T2	FR DIODE,BT2	A B
Q7008	DTC143TUA-X	DIGI TRANSISTOR	A B	D5210	or ERA18-02-T2	FR DIODE,BT2	A B
Q7008	or UN5216-X	D TRANSISTOR	A B	D5210	or 1SR153-400-T2	FR DIODE,BT2	A B
Q7009	DTC143TUA-X	DIGI TRANSISTOR	A B	D5210	or 10ELS2-T2	FR DIODE,BT2	A B
Q7009	or UN5216-X	D TRANSISTOR	A B	D5210	or PG104RS-T2	FR DIODE,BT2	A B
Q7010	DTC143TUA-X	DIGI TRANSISTOR	A B	D5301	MTZJ15C-T2	Z DIODE	A B
Q7010	or UN5216-X	D TRANSISTOR	A B	D5301	or RD15ES/B3/-T2	Z DIODE	A B
Q7011	DTC143TUA-X	DIGI TRANSISTOR	A B	D5302	MTZJ11C-T2	Z DIODE,SW12V	A B
Q7011	or UN5216-X	D TRANSISTOR	A B	D5302	or RD11ES/B3/-T2	Z DIODE,SW12V	A B
Q7012	DTC143TUA-X	DIGI TRANSISTOR	A B	D5303	MTZJ5.6A-T2	Z DIODE	A B
Q7012	or UN5216-X	D TRANSISTOR	A B	D5303	or RD5.6ES/B1/-T2	Z DIODE	A B
Q7013	DTC143TUA-X	DIGI TRANSISTOR	A B	D5305	MTZJ5.6C-T2	Z DIODE,SW5V	A B
Q7013	or UN5216-X	D TRANSISTOR	A B	D5305	or RD5.6ES/B3/-T2	Z DIODE,SW5V	A B
Q7014	DTC143TUA-X	DIGI TRANSISTOR	A B	D6002	HZ30-2L-T2	Z DIODE	A B
Q7014	or UN5216-X	D TRANSISTOR	A B	D6002	or HZ30-2LTD	Z DIODE (M)	A B
Q7201	2SC1317/RS/-T	TRANSISTOR	A B	D7051	1SS133-T2	SI DIODE,ESD	A B
D1	QUY153-050Y	IM BUS WIRE,ESD	A B	D7051	or 1SS270A-T2	SI DIODE,ESD	A B
D201	QRE141J-152Y	C RESISTOR,OSD CS	1.5kΩ,1/4W A B	R1	NRSA02J-622X	MG RESISTOR	6.2kΩ,1/10W A B
D202	QRE141J-101Y	C RESISTOR,S.CLK	100Ω,1/4W A B	R2	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W A B
D203	QRE141J-101Y	C RESISTOR,S.DATA	100Ω,1/4W A B	R3	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W A B
D2251	1SS133-T2	SI DIODE	A B	R5	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W A B
D2251	or 1SS270A-T2	SI DIODE	A B	R6	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W A B
D3001	LNB2301L01VI	IR LED,LED	A B	R7	NRSA02J-681X	MG RESISTOR	680Ω,1/10W A B
D3002	1SS133-T2	SI DIODE	A B	R10	QRE141J-103Y	C RESISTOR	10kΩ,1/4W A B
D3002	or 1SS270A-T2	SI DIODE	A B	R21	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W A B
D3003	RD39ES/B3/-T2	Z DIODE,POWER DET	A B	R22	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W A B
D3003	or MTZJ39C-T2	Z DIODE,POWER DET	A B	R23	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W B
D3004	11ES2-T2	SI DIODE,BU5V	A B	R25	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W A B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#REF No.	PART No.	PART NAME, DESCRIPTION	A B
R26	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R27	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W A B
R28	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W A B
R29	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W A B
R30	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W B
R31	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W A B
R32	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W A B
R35	NDC21HJ-470X	C CAPACITOR	47pF, 50V A B
R36	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W A B
R38	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W A B
R40	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R41	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W A B
R42	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W A B
R43	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R46	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W A B
R48	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R51	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W A B
R52	NQR0360-003X	FERRITE BEADS	A B
R65	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B
R68	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W B
R76	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W B
R77	NRSA02J-223X	MG RESISTOR	22kΩ, 1/10W A B
R78	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W A B
R84	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R88	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R90	NRSA02J-391X	MG RESISTOR	390Ω, 1/10W A B
R93	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W A B
R104	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R118	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R201	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R202	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R208	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W A B
R209	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R210	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W A B
R211	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W A B
R212	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
R213	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R216	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R224	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
R225	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W A B
R226	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R301	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W B
R302	NRSA02J-124X	MG RESISTOR	120kΩ, 1/10W B
R303	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W B
R304	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W B
R305	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W B
R306	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W B
R307	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W B
R308	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W B
R309	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W B
R310	NRSA02J-223X	MG RESISTOR	22kΩ, 1/10W B
R311	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W B
R312	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W B
R313	NRSA02J-223X	MG RESISTOR	22kΩ, 1/10W B
R314	NRVA02D-243X	CMF RESISTOR	24kΩ, 1/10W B
R315	NRSA02J-564X	MG RESISTOR	560kΩ, 1/10W B
R316	NRSA02J-124X	MG RESISTOR	120kΩ, 1/10W B
R318	NRSA02J-821X	MG RESISTOR	820Ω, 1/10W B
R329	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W B
R2003	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
R2005	NRSA02J-153X	MG RESISTOR	15kΩ, 1/10W A B

#REF No.	PART No.	PART NAME, DESCRIPTION	A B
R2007	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W A B
R2008	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R2010	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W A B
R2013	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R2014	NRSA02J-224X	MG RESISTOR	220kΩ, 1/10W A B
R2015	NRSA02J-181X	MG RESISTOR	180Ω, 1/10W A B
R2016	NRSA02J-393X	MG RESISTOR	39kΩ, 1/10W A B
R2017	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W A B
R2018	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R2019	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R2020	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R2041	QRE141J-0R0	C RESISTOR	0Ω, 1/4W A B
R2053	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W A B
R2054	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W A B
R2055	NRSA02J-3R3X	MG RESISTOR	3.3Ω, 1/10W A B
R2056	QRE141J-820Y	C RESISTOR	82Ω, 1/4W A B
R2057	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R2058	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W A B
R2059	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R2060	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W A B
R2201	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R2202	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R2203	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R2204	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R2205	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R2206	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R2207	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R2208	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R2209	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W A B
R2210	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R2211	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W A B
R2212	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W A B
R2213	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R2214	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W A B
R2215	NRSA02J-181X	MG RESISTOR	180Ω, 1/10W A B
R2216	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W A
R2217	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A
R2218	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W A B
R2219	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W A B
R2220	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R2222	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R2223	NRSA02J-511X	MG RESISTOR	510Ω, 1/10W A B
R2224	NRSA02J-511X	MG RESISTOR	510Ω, 1/10W A B
R2225	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R2226	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W A B
R2227	NRSA02J-393X	MG RESISTOR	39kΩ, 1/10W A B
R2228	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W A B
R2229	NRSA02J-393X	MG RESISTOR	39kΩ, 1/10W A B
R2230	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R2231	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R2232	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W A B
R2233	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
R2234	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
R2235	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W A B
R2236	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W A B
R2237	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W A B
R2238	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W A B
R2251	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R2252	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W A B
R2253	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
R2254	QRE141J-103Y	C RESISTOR	10kΩ, 1/4W A B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B
R2255	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W A B	R3085	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R2256	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W A B	R3086	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3011	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3087	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3012	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	R3088	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3013	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3089	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3014	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3090	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3015	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3091	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3016	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3092	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3017	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3093	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3018	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B	R3094	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3019	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3095	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3020	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3096	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3021	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3097	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3022	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3103	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3025	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B	R3105	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3026	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B	R3106	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3027	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B	R3205	QRE141J-181Y	C RESISTOR	180Ω, 1/4W A B
R3029	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3206	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W A B
R3030	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3207	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W A B
R3031	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3208	NRSA02J-121X	MG RESISTOR	120Ω, 1/10W A B
R3033	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3209	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W A B
R3034	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3210	NRSA02J-121X	MG RESISTOR	120Ω, 1/10W A B
R3035	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3211	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W A B
R3036	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B	R3212	NRSA02J-474X	MG RESISTOR	470kΩ, 1/10W A B
R3037	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3213	NRSA02J-334X	MG RESISTOR	330kΩ, 1/10W A B
R3038	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W A B	R3214	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3039	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3215	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3040	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B	R3216	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3041	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3217	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3042	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3218	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R3044	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3219	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R3046	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3220	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W A B
R3047	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3222	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R3048	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3223	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R3049	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3224	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R3050	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3225	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3051	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3229	NRSA02J-105X	MG RESISTOR	1MΩ, 1/10W A B
R3052	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W A B	R3230	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R3053	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W A B	R3231	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R3054	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3234	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3055	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3235	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W A B
R3056	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3236	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W A B
R3057	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3237	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3058	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3238	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3059	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3241	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3060	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R3242	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
R3061	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R3252	NRSA02J-153X	MG RESISTOR	15kΩ, 1/10W A B
R3062	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B	R3253	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3063	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R4003	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W A B
R3066	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B	R4004	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W A B
R3069	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	R4005	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W A B
R3071	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B	R4007	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R3072	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	R4008	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R3073	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R4009	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R3074	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R4010	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
R3075	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W A B	R4012	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W A B
R3076	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W A B	R4013	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
R3077	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R4015	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W A B
R3078	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R4017	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
R3079	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R5101	QRE141J-224Y	C RESISTOR	220kΩ, 1/4W A B
R3081	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B	R5102	QRE141J-224Y	C RESISTOR	220kΩ, 1/4W A B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B
R5103	QRE141J-683Y	C RESISTOR	68kΩ, 1/4W A B	B12	NRSA02J-0R0X	MG RESISTOR, C SYNC(D)	0Ω, 1/10W A B
R5104	QRG02GJ-683	OMF RESISTOR	68kΩ, 2W A B	B65	NRSA02J-0R0X	MG RESISTOR, TITLE REC	0Ω, 1/10W A B
R5106	QRT01DJ-R39X	MF RESISTOR	0.39Ω, 1W A B	B203	QUY160-100Y	IM BUS WIRE, I2C CLK2	A B
R5107	QRE121J-331Y	C RESISTOR	330Ω, 1/2W A B	B204	QUY160-080Y	IM BUS WIRE, I2C DATA2	A B
R5108	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W A B	B214	NRSA02J-0R0X	MG RESISTOR, RF VIDEO	0Ω, 1/10W A B
R5109	QRE141J-561Y	C RESISTOR	560Ω, 1/4W A B	B302	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W B
R5110	NRSA02J-224X	MG RESISTOR	220kΩ, 1/10W A B	B2051	QUY160-060Y	IM BUS WIRE	A B
R5111	NRSA02J-391X	MG RESISTOR	390Ω, 1/10W A B	B2221	QUY160-140Y	IM BUS WIRE, AL5V	A B
R5112	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W A B	B3001	QUY160-060Y	IM BUS WIRE, ICT	A B
R5302	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	B5001	QUY160-100Y	IM BUS WIRE, OPT:LF5001	A B
R5303	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W A B	B5002	QUY160-100Y	IM BUS WIRE, OPT:LF5001	A B
R5304	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W A B	C1	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R5306	NRSA02J-181X	MG RESISTOR	180Ω, 1/10W A B	C2	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R5310	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B	C3	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R5312	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	C4	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R5313	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	C5	QEK0J0M-476Z	E CAPACITOR	47μF, 6.3V A B
R5319	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W A B	C6	QDYB1CM-103Y	C CAPACITOR	0.01μF, 16V A B
R5332	QRL02DJ-391X	OMF RESISTOR	390Ω, 2W A B	C7	NCB21HK-102X	C CAPACITOR	0.001μF, 50V A B
R6020	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	C8	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R6021	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	C9	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V A B
R6030	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	C10	NDC21HJ-151X	C CAPACITOR	150pF, 50V A B
R6031	NRSA02J-271X	MG RESISTOR	270Ω, 1/10W A B	C11	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R6032	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A	C12	NDC21HJ-8R0X	C CAPACITOR	8pF, 50V A B
R6032	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W B	C14	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R6033	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W A	C15	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R6033	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W B	C16	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R6050	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A	C17	QEKJ1HM-335Z	E CAPACITOR	3.3μF, 50V A B
R6051	QRE141J-101Y	C RESISTOR	100Ω, 1/4W A	C19	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V A B
R6052	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A	C20	QEPF1HM-105Z	BP E CAPACITOR	1μF, 50V A B
R6056	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A	C21	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R6080	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	C22	QEKJ0JM-476Z	E CAPACITOR	47μF, 6.3V A B
R7001	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W A B	C23	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7002	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W A B	C24	QCB81HK-104Y	C CAPACITOR	0.1μF, 50V A B
R7003	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W A B	C25	NDC21HJ-6R0X	C CAPACITOR	6pF, 50V A B
R7004	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C26	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7005	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W A B	C27	NCB21HK-223X	C CAPACITOR	0.022μF, 50V A B
R7006	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W A B	C28	QEKJ1HM-335Z	E CAPACITOR	3.3μF, 50V A B
R7007	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W A B	C29	NCB21EK-333X	C CAPACITOR	0.033μF, 25V A B
R7015	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B	C30	NCB21CK-474X	C CAPACITOR	0.47μF, 16V A B
R7020	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B	C31	QEKJ0JM-476Z	E CAPACITOR	47μF, 6.3V A B
R7021	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W A B	C32	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7022	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W A B	C33	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V A B
R7023	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W A B	C34	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R7024	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W A B	C35	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7025	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B	C36	QEKJ1HM-475Z	E CAPACITOR	4.7μF, 25V A B
R7026	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B	C37	QEKJ1HM-105Z	E CAPACITOR	1μF, 50V A B
R7030	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B	C38	QEKJ0JM-476Z	E CAPACITOR	47μF, 6.3V A B
R7031	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W A B	C40	QEKJ1EM-106Z	E CAPACITOR	10μF, 25V A B
R7032	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W A B	C44	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7033	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W A B	C45	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7034	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W A B	C53	NDC21HJ-101X	C CAPACITOR	100pF, 50V A B
R7160	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C59	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7161	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C61	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7162	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C63	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R7163	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W A B	C64	NDC21HJ-220X	C CAPACITOR	22pF, 50V A B
R7202	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W A B	C65	QEKJ1HM-105Z	E CAPACITOR	1μF, 50V A B
R7203	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B	C69	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R7204	QRE121J-100Y	C RESISTOR	10Ω, 1/2W A B	C70	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
VR2251	QVP0039-223Z	TRIM RESISTOR	A B	C72	NDC21HJ-470X	C CAPACITOR	47pF, 50V A B
B5	NRSA02J-0R0X	MG RESISTOR, PB FM BUF	0Ω, 1/10W A B	C73	NDC21HJ-120X	C CAPACITOR	12pF, 50V A B
B10	NRSA02J-0R0X	MG RESISTOR, C IN(SVHS)	0Ω, 1/10W A B	C78	NCB21HK-103X	C CAPACITOR	0.01μF, 50V B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B
C80	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	C2054	NCB21EK-223X	C CAPACITOR	0.022μF,25V A B
C84	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W A B	C2055	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C92	NDC21HJ-330X	C CAPACITOR	33pF,50V A B	C2061	QFV91HJ-823Z	MF CAPACITOR	0.082μF,50V A B
C103	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	C2201	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C106	NCB21HK-821X	C CAPACITOR	820pF,50V A B	C2202	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V A B
C108	NDC21HJ-680X	C CAPACITOR	68pF,50V A B	C2203	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V A B
C110	NDC21HJ-820X	C CAPACITOR	82pF,50V A B	C2204	QEKJ0JM-336Z	E CAPACITOR	33μF,6.3V A B
C114	NDC21HJ-181X	C CAPACITOR	180pF,50V A B	C2205	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C201	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V A B	C2206	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C204	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	C2207	NCB21HK-153X	C CAPACITOR	0.015μF,50V A B
C206	NDC21HJ-330X	C CAPACITOR	33pF,50V A B	C2208	NCB21HK-153X	C CAPACITOR	0.015μF,50V A B
C207	NDC21HJ-330X	C CAPACITOR	33pF,50V A B	C2209	QERF1CM-106Z	E CAPACITOR	10μF,16V A B
C209	NCB21CK-474X	C CAPACITOR	0.47μF,16V A B	C2210	QERF1CM-106Z	E CAPACITOR	10μF,16V A B
C210	NDC21HJ-101X	C CAPACITOR	100pF,50V A B	C2211	QEKJ0JM-336Z	E CAPACITOR	33μF,6.3V A B
C211	NDC21HJ-101X	C CAPACITOR	100pF,50V A B	C2212	QERF0JM-476Z	E CAPACITOR	47μF,6.3V A B
C212	NCB21EK-104X	C CAPACITOR	0.1μF,25V A B	C2214	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C213	QERF1EM-475Z	E CAPACITOR	4.7μF,25V A B	C2215	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C214	NCB21CK-224X	C CAPACITOR	0.22μF,16V A B	C2216	QEKJ1CM-476Z	E CAPACITOR	47μF,16V A B
C215	NCB21CK-224X	C CAPACITOR	0.22μF,16V A B	C2218	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A
C217	NDC21HJ-560X	C CAPACITOR	56pF,50V A B	C2219	QEKJ1CM-226Z	E CAPACITOR	22μF,16V A
C218	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	C2220	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C222	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	C2221	NCB21EK-223X	C CAPACITOR	0.022μF,25V A B
C225	QERF1AM-227Z	E CAPACITOR	220μF,10V A B	C2222	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B
C301	NDC21HJ-151X	C CAPACITOR	150pF,50V B	C2223	NCB21EK-473X	C CAPACITOR	0.047μF,25V A B
C302	NCB21CK-105X	C CAPACITOR	1μF,16V B	C2224	NCB21EK-473X	C CAPACITOR	0.047μF,25V A B
C303	NCB21HK-682X	C CAPACITOR	0.0068μF,50V B	C2225	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B
C304	NCB21HK-682X	C CAPACITOR	0.0068μF,50V B	C2226	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B
C305	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	C2227	QERF1CM-106Z	E CAPACITOR	10μF,16V A B
C306	NCB21CK-105X	C CAPACITOR	1μF,16V B	C2230	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C307	NDC21HJ-151X	C CAPACITOR	150pF,50V B	C2231	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C308	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	C2251	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B
C309	NCB21EK-104X	C CAPACITOR	0.1μF,25V B	C2252	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B
C310	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	C2253	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B
C311	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	C2254	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V A B
C312	NCB21HK-102X	C CAPACITOR	0.001μF,50V B	C2255	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B
C313	NCB21CK-474X	C CAPACITOR	0.47μF,16V B	C2256	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B
C315	NCB21CK-105X	C CAPACITOR	1μF,16V B	C2257	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B
C316	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	C2258	NDC21HJ-181X	C CAPACITOR	180pF,50V A B
C317	NCB21HK-681X	C CAPACITOR	680pF,50V B	C2259	QEKJ1HM-334Z	E CAPACITOR	0.33μF,50V A B
C318	NCB21EK-223X	C CAPACITOR	0.022μF,25V B	C2261	NDC21HJ-101X	C CAPACITOR	100pF,50V A B
C319	NCB21CK-105X	C CAPACITOR	1μF,16V B	C2262	NDC21HJ-101X	C CAPACITOR	100pF,50V A B
C320	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	C3008	NDC21HJ-101X	C CAPACITOR	100pF,50V A B
C321	NDC21HG-301X	C CAPACITOR	300pF,50V B	C3011	QETL0JM-338	E CAPACITOR	3300μF,6.3V A B
C322	NCB21CK-474X	C CAPACITOR	0.47μF,16V B	C3012	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V A B
C323	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V B	C3014	QERF0JM-476Z	E CAPACITOR	47μF,6.3V A B
C324	NDC21HJ-390X	C CAPACITOR	39pF,50V B	C3015	NCB21EK-104X	C CAPACITOR	0.1μF,25V A B
C2001	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V A B	C3016	NCB21EK-473X	C CAPACITOR	0.047μF,25V A B
C2002	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	C3020	NDC21HJ-101X	C CAPACITOR	100pF,50V A B
C2003	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V A B	C3021	NDC21HJ-101X	C CAPACITOR	100pF,50V A B
C2005	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V A B	C3022	NCB21EK-104X	C CAPACITOR	0.1μF,25V A B
C2006	NCB21HK-123X	C CAPACITOR	0.012μF,50V A B	C3024	NDC21HJ-220X	C CAPACITOR	22pF,50V A
C2007	QEKJ1CM-226Z	E CAPACITOR	22μF,16V A B	C3024	NDC21HJ-120X	C CAPACITOR	12pF,50V B
C2008	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V A B	C3025	QAT3725-300Z	TRIM CAPACITOR	A
C2009	NCB21HK-102X	C CAPACITOR	0.001μF,50V A B	C3026	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B
C2010	NCB21HK-152X	C CAPACITOR	0.0015μF,50V A B	C3027	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B
C2011	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V A B	C3030	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V A B
C2012	QEKJ1HM-475Z	E CAPACITOR	4.7μF,50V A B	C3031	NCB21EK-473X	C CAPACITOR	0.047μF,25V A B
C2013	NCB21HK-331X	C CAPACITOR	330pF,50V A B	C3033	NCB21EK-473X	C CAPACITOR	0.047μF,25V A B
C2017	NCB21HK-682X	C CAPACITOR	0.0068μF,50V A B	C3036	NDC21HJ-180X	C CAPACITOR	18pF,50V A B
C2051	NCB21HK-331X	C CAPACITOR	330pF,50V A B	C3037	NDC21HJ-120X	C CAPACITOR	12pF,50V A B
C2053	NCB21HK-472X	C CAPACITOR	0.0047μF,50V A B	C3040	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B
C3041	NDC21HJ-150X	C CAPACITOR	15pF,50V B	L28	QQL071J-680Y	INDUCTOR	68μH A B
C3050	NCF21EZ-104X	C CAPACITOR	0.1μF,25V A B	L201	QQL29BK-1R0Z	P COIL	1.0μH A B
C3071	QEKJ1CM-336Z	E CAPACITOR	33μF,16V A B	L202	QUY153-050Y	IM BUS WIRE	A B
C4002	NCB21EK-104X	C CAPACITOR	0.1μF,25V A B	L203	QQL29BJ-220Z	P COIL	22μH A B
C4004	QEKJ1AM-226Z	E CAPACITOR	22μF,10V A B	L204	QQL29BJ-100Z	P COIL	10μH A B
C4005	NCB21HK-222X	C CAPACITOR	0.0022μF,50V A B	L206	QQL071J-220Y	INDUCTOR	22μH A B
C4006	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V A B	L301	QQL29BJ-100Z	P COIL	10μH B
C4008	NCB21AK-105X	C CAPACITOR	1μF,10V A B	L302	QQL231J-6R8Y	INDUCTOR	6.8μH B
C4009	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W A B	L303	QQL231J-270Y	INDUCTOR	27μH B
C4010	NCB21EK-223X	C CAPACITOR	0.022μF,25V A B	L304	QQL29BJ-101Z	P COIL	100μH B
C4011	NCB21EK-104X	C CAPACITOR	0.1μF,25V A B	L2001	QUY153-050Y	IM BUS WIRE	A B
C4012	QERF1HM-105Z	E CAPACITOR	1μF,50V A B	L2201	QUY153-050Y	IM BUS WIRE	A B
C4014	NDC21HJ-101X	C CAPACITOR	100pF,50V A B	L2251	QQL29BJ-100Z	P COIL	10μH A B
C4015	NCB21HK-102X	C CAPACITOR	0.001μF,50V A B	L2252	QQL29BJ-151Z	P COIL	150μH A B
C4031	QEKJ1CM-336Z	E CAPACITOR	33μF,16V A B	L4001	QUY153-050Y	IM BUS WIRE	A B
△ C5001	QFZ9072-473	MM CAPACITOR	0.047μF,125V A B	L5201	PELN1184	CHOKO COIL	33μH A B
△ C5004	QCZ9071-222	C CAPACITOR	0.0022μF,250V A B	L5202	PELN1184	CHOKO COIL	33μH A B
C5006	QEZ0375-686	E CAPACITOR	68μF,400V A B	L6001	QQL29BJ-100Z	P COIL	10μH A B
C5101	QCZ0212-472	C CAPACITOR	0.0047μF,1kV A B	L6002	QQL29BJ-100Z	P COIL	10μH A B
C5102	QCZ0302-330Z	C CAPACITOR	33pF,1kV A B	L6501	QUY153-050Y	IM BUS WIRE	A B
C5104	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	L7201	QQL29BJ-100Z	P COIL	10μH A B
C5105	QFN31HJ-153Z	M CAPACITOR	0.015μF,50V A B	△ CP3001	QMFZ050-1R5X-E	FUSE	T1.5A,125V A B
C5106	QCB1HJ-271Y	C CAPACITOR	270pF,50V A B	△ CP4001	QMFZ050-1R5X-E	FUSE	T1.5A,125V A B
C5107	QFV91HJ-104Z	MF CAPACITOR	0.1μF,50V A B	DI7001	LTG-0126M-03J	LED	A B
C5202	QETN1CM-108Z	E CAPACITOR	1000μF,16V A B	FC5001	QNG0006-001Z	FUSE CLIP,FOR F5001	A B
C5203	QEMT1AM-128	E CAPACITOR	1200μF,10V A B	FC5002	QNG0006-001Z	FUSE CLIP,FOR F5001	A B
C5204	QETJ2AM-475Z	E CAPACITOR	4.7μF,10V A B	J7105	QNN0381-002	PIN JACK,NI YWR	A B
C5206	QEKJ1CM-476Z	E CAPACITOR	47μF,16V A B	JS3001	QSW0954-002	ROTARY ENCODER,R.ENCODER	A B
C5207	QEKJ1CM-107Z	E CAPACITOR	100μF,16V A B	K2001	NRSA02J-0R0X	MG RESISTOR,SET1	0Ω,1/10W A B
C5301	QEKJ1CM-107Z	E CAPACITOR	100μF,16V A B	K2002	NRSA02J-0R0X	MG RESISTOR,SET1	0Ω,1/10W A B
C5303	QEKJ1CM-107Z	E CAPACITOR	100μF,16V A B	K2003	NRSA02J-0R0X	MG RESISTOR,SET1	0Ω,1/10W A B
C5305	QFVF1HJ-274Z	MF CAPACITOR	0.27μF,50V A B	K2004	NRSA02J-0R0X	MG RESISTOR,SET1	0Ω,1/10W A B
C5307	QEKJ1CM-476Z	E CAPACITOR	47μF,16V A B	K2251	NQR0007-001X	FERRITE BEADS	A B
C5308	QEKJ1CM-107Z	E CAPACITOR	100μF,16V A B	K2252	NQR0007-001X	FERRITE BEADS	A B
C6008	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	K2253	NQR0007-001X	FERRITE BEADS	A B
C6013	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	K5101	QQR0678-001Z	FERRITE BEADS	A B
C6032	NCB21EK-473X	C CAPACITOR	0.047μF,25V A	K5102	QUY153-050Y	IM BUS WIRE	A B
C6037	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B	△ LF5002	QQR0978-001	LINE FILTER	A B
C6055	NDC21HJ-220X	C CAPACITOR	22pF,50V A	PC3001	RPI-304J	IC(PHOTO SENSOR),SP REEL	A B
C6056	NDC21HJ-470X	C CAPACITOR	47pF,50V A	PC3002	RPI-304J	IC(PHOTO SENSOR),TU REEL	A B
C6501	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A	△ PC5101	PC123Y22	IC(PHOTO COUPLER)	A B
C6501	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V B	S3001	QSW0602-004	PUSH SWITCH,REC.SAFETY	A B
C6502	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	S3002	QSW0602-004	PUSH SWITCH,S.CASS	A B
C7011	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V A B	S7002	QSW0456-002Z	TACT SWITCH,POWER	A B
C7165	NCB21HK-681X	C CAPACITOR	680pF,50V A B	S7003	QSW0456-002Z	TACT SWITCH,TIMER	A B
C7167	NCB21HK-681X	C CAPACITOR	680pF,50V A B	S7004	QSW0456-002Z	TACT SWITCH,REC LINK	A B
C7202	QETJ0JM-477Z	E CAPACITOR	470μF,6.3V A B	S7006	QSW0456-002Z	TACT SWITCH,SVHS ET	A B
L1	QQL29BJ-100Z	P COIL	10μH A B	S7010	QSW0456-002Z	TACT SWITCH,REC	A B
L2	QQL071J-121Y	INDUCTOR	120μH A B	S7011	QSW0456-002Z	TACT SWITCH,PAUSE	A B
L3	QQL29BJ-100Z	P COIL	10μH A B	S7013	QSW0456-002Z	TACT SWITCH,STOP/EJ	A B
L4	QQL29BJ-100Z	P COIL	10μH A B	S7015	QSW0456-002Z	TACT SWITCH,PLAY	A B
L5	QQR0521-012Z	NOISE FILTER	A B	S7017	QSW0456-002Z	TACT SWITCH,SP/LP/EP	A B
L12	QQR0967-001	CHOKO COIL	12μH A B	T2051	PELN0832	OSC TRANS	A B
L13	QQL071J-330Y	INDUCTOR	33μH A B	△ T5001	QQS0083-001	SW TRANSF	A B
L15	QQL29BJ-100Z	P COIL	10μH A B	TP106	QUY160-100Y	IM BUS WIRE,PB FM	A B
L18	QQL071J-220Y	INDUCTOR	22μH A B	TP111	QUY160-100Y	IM BUS WIRE,D.FF	A B
L19	QQL071J-120Y	INDUCTOR	12μH A B	TP2253	QUY160-100Y	IM BUS WIRE,A.PB FM	A B
L20	QUY153-050Y	IM BUS WIRE	A B	TP2254	QUY160-100Y	IM BUS WIRE,A.REC.FM	A B
L22	QQL231J-1R0Y	INDUCTOR	1.0μH A B	TP4001	QUY160-100Y	IM BUS WIRE,CTL.P	A B
L24	QQL071J-270Y	INDUCTOR	27μH A B	TU6001	QAU0261-002	TUNER,15ALPS3SYS	A
L27	QQL071J-330Y	INDUCTOR	33μH A B	TU6001	QAU0210-001	TUNER,LG BG/L	B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B
WR6501	QUB321-16A4A4	SIN TWIST WIRE,W421-D2	B
X1	QAX0576-001Z	CRYSTAL,PAL	A B
X3001	QAX0445-001	CRYSTAL,32K ADJ	A
X3001	QAX0444-001	CRYSTAL,32K ADJ	B
X3002	QAX0527-001	CRYSTAL,10MHz	A B
SD1	LP21105-001A	SHIELD CASE,FOR P/R	A B
ET1	PQ21623-2-5	EARTH PLATE(RF),FOR TUNER	A B
HS1	LP40090-001A	HEAT SINK,FOR Q5101	A B
OT1	QYTD5F3010Z	TAP SCREW,X2,FOR TERM_B	A B
OT2	PU59915-110	#500SPACER0.014,R2041	A B
OT3	QYTDST3006Z	TAP SCREW,FOR Q5101	A B
OT4	PM30130-001	SPACER,FOR WR6501	B
CN1	QGF1201C2-09	FPC CONNECTOR,DRUM 1-9	A B
CN901	QGB2024K1-10S	B TO B CONNECTOR,TERMINAL	A B
CN902	QGB2024K1-12S	B TO B CONNECTOR,TERMINAL	A B
CN903	QGB2024K1-10S	B TO B CONNECTOR,TERMINAL	A B
CN904	QGB2024K1-11S	B TO B CONNECTOR,TERMINAL	A B
CN905	QGB2024K1-09S	B TO B CONNECTOR,TERMINAL	A B
CN2001	QGF1207C1-06	FPC CONNECTOR,A/C HEAD	A B
CN2002	QGB2532J1-02	B TO B CONNECTOR,FE HEAD	A B
CN3001	QGB2032M4-12	B TO B CONNECTOR,CAP+DRUM M	A B
△ CN5001	QGA7901C3-02	W TO B CONNECTOR,POWER CORD	A B
CN7002	QGF1207C1-04	FPC CONNECTOR,A,JOG V16	A B
△ F5001	QMF51E2-2R0-J1	FUSE T2.0A,AC250V	A B

2D DIGITAL BOARD ASSEMBLY <05>

PW1	LPA10162-02C	2D DIGITAL BOARD ASSY	A B
IC1201	JCP8036	IC	A B
IC1201 or JCP8057	IC		A B
Q1201	2SC1317/RS/-T	TRANSISTOR	A B
Q1202	2SA1576A/QR/-X	TRANSISTOR	A B
Q1202 or 2PA1576/R/-X	TRANSISTOR		A B
Q1203	2SA1576A/QR/-X	TRANSISTOR	A B
Q1203 or 2PA1576/R/-X	TRANSISTOR		A B
Q1204	2SC4081/QRS/-X	TRANSISTOR	A B
Q1204 or 2PC4081/R/-X	TRANSISTOR		A B
Q1205	2SC4081/S/-X	TRANSISTOR	A B
D1201	RD4.3ES/B3/-T2	Z DIODE	A B
R1201	NRSA02J-121X	MG RESISTOR 120Ω,1/10W	A B
R1202	NRSA02J-101X	MG RESISTOR 100Ω,1/10W	A B
R1203	NRSA02J-221X	MG RESISTOR 220Ω,1/10W	A B
R1204	NRSA02J-221X	MG RESISTOR 220Ω,1/10W	A B
R1205	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	A B
R1206	NRSA02J-561X	MG RESISTOR 560Ω,1/10W	A B
R1207	NRSA02J-562X	MG RESISTOR 5.6kΩ,1/10W	A B
R1208	NRSA02J-123X	MG RESISTOR 12kΩ,1/10W	A B
R1209	NRSA02J-180X	MG RESISTOR 18Ω,1/10W	A B
R1210	NRVA02D-393X	CMF RESISTOR 39Ω,1/10W	A B
R1211	NRVA02D-153X	CMF RESISTOR 15Ω,1/10W	A B
R1212	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	A B
R1213	NRSA02J-331X	MG RESISTOR 330Ω,1/10W	A B
R1214	NRSA02J-121X	MG RESISTOR 120Ω,1/10W	A B
R1215	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	A B
R1216	NRSA02J-331X	MG RESISTOR 330Ω,1/10W	A B
R1217	NRVA02D-101X	CMF RESISTOR 100Ω,1/10W	A B
R1218	NRVA02D-301X	CMF RESISTOR 300Ω,1/10W	A B
R1220	NRSA02J-561X	MG RESISTOR 560Ω,1/10W	A B
R1222	NRSA02J-471X	MG RESISTOR 470Ω,1/10W	A B

#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B
R1224	NRSA02J-561X	MG RESISTOR 560Ω,1/10W	A B
VR1201	QUY153-050Y	IM BUS WIRE	A B
C1201	QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V	A B
C1208	NDC21HJ-221X	C CAPACITOR 220pF,50V	A B
C1210	NDC21HJ-330X	C CAPACITOR 33pF,50V	A B
C1211	QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V	A B
C1212	NCB21HK-102X	C CAPACITOR 0.001μF,50V	A B
C1213	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1214	NCF21CZ-105X	C CAPACITOR 1μF,16V	A B
C1215	QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V	A B
C1216	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1217	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1218	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1219	NCF21CZ-105X	C CAPACITOR 1μF,16V	A B
C1220	QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V	A B
C1222	NDC21HJ-820X	C CAPACITOR 82pF,50V	A B
C1223	NDC21HJ-270X	C CAPACITOR 27pF,50V	A B
C1225	NDC21HJ-820X	C CAPACITOR 82pF,50V	A B
C1226	NDC21HJ-270X	C CAPACITOR 27pF,50V	A B
C1227	NCB21EK-104X	C CAPACITOR 0.1μF,25V	A B
C1228	QEKJ1EM-475Z	E CAPACITOR 4.7μF,25V	A B
C1229	NCB21HK-103X	C CAPACITOR 0.01μF,50V	A B
C1230	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1231	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1232	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1233	QDYB1CM-103Y	C CAPACITOR 0.01μF,16V	A B
C1234	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1235	QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V	A B
C1236	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1237	NCF21EZ-104X	C CAPACITOR 0.1μF,25V	A B
C1238	NDC21HJ-180X	C CAPACITOR 18pF,50V	A B
C1239	NDC21HJ-560X	C CAPACITOR 56pF,50V	A B
C1243	NCB21HK-103X	C CAPACITOR 0.01μF,50V	A B
C1244	QEKJ1EM-475Z	E CAPACITOR 4.7μF,25V	A B
C1245	NDC21HJ-150X	C CAPACITOR 15pF,50V	A B
C1246	QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V	A B
L1201	QQL071J-1R0Y	INDUCTOR 1.0μH	A B
L1202	QRE141J-181Y	C RESISTOR 180Ω,1/4W	A B
L1203	QQL29BJ-331Z	P COIL 330μH	A B
L1204	QQL29BJ-221Z	P COIL 220μH	A B
L1205	QQL071J-6R8Y	INDUCTOR 6.8μH	A B
L1206	QQL071J-6R8Y	INDUCTOR 6.8μH	A B
L1207	QQL29BJ-221Z	P COIL 220μH	A B
L1208	QQL071J-150Y	INDUCTOR 15μH	A B
LC1201	QQL29BJ-101Z	P COIL 100μH	A B
SD1	LP31098-001B	SHIELD CASE(DEG)	A B
BK1	LP40425-001A	BRACKET(PWB)	A B
CN1201	QGG2502K1-12	HEADER PIN	A B

TERMINAL BOARD ASSEMBLY <06>

PW1	LPA10138-07A	TERMINAL BOARD ASSY,S1EU/EK	A
PW1	LPA10138-11A	TERMINAL BOARD ASSY,S1MS	B
IC501	JCP8018	IC	A B
IC501 or JCP8028	IC		A B
IC501 or JCP8028-01	IC		A B
IC501 or JCP8038	IC		A B
IC502	VC2076DP	IC	A B
IC901	BH7636S	IC,CH+	A B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B
Q901	UN5211-X	DIGI TRANSISTOR	A B	R905	NQL402M-4R7X	INDUCTOR	4.7μH A B
Q901	or DTC114EUA-X	DIGI TRANSISTOR	A B	R906	QQL231J-100Y	INDUCTOR	10μH A B
Q901	or RN1302-X	DIGI TRANSISTOR	A B	R907	QQL231J-100Y	INDUCTOR	10μH A B
Q901	or PDTCT114EU-X	DIGI TRANSISTOR	A B	R908	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
Q902	2SB1218A/QR/-X	TRANSISTOR	A B	R909	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W A B
Q902	or 2SA1576A/QR/-X	TRANSISTOR	A B	R910	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W A B
Q902	or 2PA1576/R/-X	TRANSISTOR	A B	R911	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W A B
Q905	UN521E-X	DIGI TRANSISTOR	A B	R912	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
Q905	or DTC144WUA-X	DIGI TRANSISTOR	A B	R913	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
Q905	or RN1309-X	DIGI TRANSISTOR	A B	R914	QQL231J-100Y	INDUCTOR	10μH A B
Q905	or PDTCT144WU-X	DIGI TRANSISTOR	A B	R915	QQL231J-100Y	INDUCTOR	10μH A B
Q906	2SD1819A/QRS/-X	TRANSISTOR	A B	R916	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
Q906	or 2SC4081/QRS/-X	TRANSISTOR	A B	R917	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
Q906	or 2PC4081/R/-X	TRANSISTOR	A B	R918	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
Q907	2SD1819A/QRS/-X	TRANSISTOR	A B	R929	NRSA02J-820X	MG RESISTOR	82Ω, 1/10W A B
Q907	or 2SC4081/QRS/-X	TRANSISTOR	A B	R930	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W A B
Q907	or 2PC4081/R/-X	TRANSISTOR	A B	R931	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
Q908	2SD1819A/QRS/-X	TRANSISTOR	A B	R932	NRSA02J-511X	MG RESISTOR	510Ω, 1/10W A B
Q908	or 2SC4081/QRS/-X	TRANSISTOR	A B	R933	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W A B
Q908	or 2PC4081/R/-X	TRANSISTOR	A B	R934	QRE141J-101Y	C RESISTOR	100Ω, 1/4W A B
Q909	2SB1218A/QR/-X	TRANSISTOR	A B	R935	QRE141J-101Y	C RESISTOR	100Ω, 1/4W A B
Q909	or 2SA1576A/QR/-X	TRANSISTOR	A B	R936	QRE141J-101Y	C RESISTOR	100Ω, 1/4W A B
Q909	or 2PA1576/R/-X	TRANSISTOR	A B	R937	QRE141J-101Y	C RESISTOR	100Ω, 1/4W A B
Q910	2SB1218A/QR/-X	TRANSISTOR	A B	R938	QRE141J-101Y	C RESISTOR	100Ω, 1/4W A B
Q910	or 2SA1576A/QR/-X	TRANSISTOR	A B	R939	QRE141J-101Y	C RESISTOR	100Ω, 1/4W A B
Q910	or 2PA1576/R/-X	TRANSISTOR	A B	R940	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W A B
Q911	UN521E-X	DIGI TRANSISTOR	A B	R941	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W A B
Q911	or DTC144WUA-X	DIGI TRANSISTOR	A B	R942	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W A B
Q911	or RN1309-X	DIGI TRANSISTOR	A B	R943	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
Q911	or PDTCT144WU-X	DIGI TRANSISTOR	A B	R944	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W A B
Q912	UN5215-X	DIGI TRANSISTOR	A B	R945	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
Q912	or DTC114TUA-X	DIGI TRANSISTOR	A B	R946	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W A B
Q912	or RN1311-X	D TRANSISTOR	A B	R947	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
Q912	or PDTCT114TU-X	DIGI TRANSISTOR	A B	R949	QRE121J-331Y	C RESISTOR	330Ω, 1/2W A B
R503	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W A B	R951	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W A B
R504	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W A B	R952	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W A B
R505	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W A B	R953	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W A B
R506	NRSA02J-391X	MG RESISTOR	390Ω, 1/10W A B	R964	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B
R507	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W A B	C501	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V A B
R508	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W A B	C502	QEKJ1HM-475Z	E CAPACITOR	4.7μF, 25V A B
R509	NRSA02J-162X	MG RESISTOR	1.6kΩ, 1/10W A B	C503	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V A B
R510	NRVA02D-102X	CMF RESISTOR	1kΩ, 1/10W A B	C504	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R511	NRVA02D-471X	CMF RESISTOR	470Ω, 1/10W A B	C505	QEKJ1HM-475Z	E CAPACITOR	4.7μF, 25V A B
R512	NRVA02D-102X	CMF RESISTOR	1kΩ, 1/10W A B	C506	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R513	NRVA02D-152X	CMF RESISTOR	1.5kΩ, 1/10W A B	C507	QEKJ0JM-476Z	E CAPACITOR	47μF, 6.3V A B
R514	NRVA02D-332X	CMF RESISTOR	3.3kΩ, 1/10W A B	C508	QEKJ1HM-474Z	E CAPACITOR	0.47μF, 50V A B
R515	NRVA02D-332X	CMF RESISTOR	3.3kΩ, 1/10W A B	C509	QEKJ1CM-106Z	E CAPACITOR	10μF, 16V A B
R516	QUY160-100Y	IM BUS WIRE	A B	C510	QEKJ0JM-476Z	E CAPACITOR	47μF, 6.3V A B
R517	QUY160-100Y	IM BUS WIRE	A B	C511	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R525	QRE141J-125Y	C RESISTOR	1.2MΩ, 1/4W A B	C512	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R527	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W A B	C513	QEKJ1HM-475Z	E CAPACITOR	4.7μF, 25V A B
R531	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C514	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R532	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C515	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R533	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C516	NCB21HK-103X	C CAPACITOR	0.01μF, 50V A B
R534	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C518	NCB21EK-104X	C CAPACITOR	0.1μF, 25V A B
R535	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C519	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V A B
R536	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W A B	C520	QEKJ1HM-475Z	E CAPACITOR	4.7μF, 25V A B
R901	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W A B	C521	QEKJ1HM-475Z	E CAPACITOR	4.7μF, 25V A B
R902	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W A B	C522	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V A B
R903	QRE141J-680Y	C RESISTOR	68Ω, 1/4W A B	C523	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V A B
R904	NQL402M-4R7X	INDUCTOR	4.7μH A B	C524	NDC21HG-301X	C CAPACITOR	300pF, 50V A B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#△ REF No.	PART No.	PART NAME, DESCRIPTION	A B
C525	NDC21HG-301X	C CAPACITOR	300pF,50V A B	C958	NCB21HK-331X	C CAPACITOR	330pF,50V A B
C526	NDC21HJ-101X	C CAPACITOR	100pF,50V A B	C959	NCB21HK-331X	C CAPACITOR	330pF,50V A B
C527	NDC21HJ-181X	C CAPACITOR	180pF,50V A B	L501	QQL29BJ-100Z	P COIL	10μH A B
C528	NDC21HG-271X	C CAPACITOR	270pF,50V A B	L503	QQL29BJ-100Z	P COIL	10μH A B
C529	NDC21HG-820X	C CAPACITOR	82pF,50V A B	L504	QQL29BJ-100Z	P COIL	10μH A B
C530	NDC21HG-221X	C CAPACITOR	220pF,50V A B	L505	QUY153-050Y	IM BUS WIRE	A B
C531	NDC21HG-301X	C CAPACITOR	300pF,50V A B	L901	QQL231J-R22Y	INDUCTOR	0.22μH A B
C532	NDC21HG-301X	C CAPACITOR	300pF,50V A B	L902	QQL071J-1R0Y	INDUCTOR	1.0μH A B
C533	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	L903	QQL071J-150Y	INDUCTOR	15μH A B
C534	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V A B	L904	QQL071J-150Y	INDUCTOR	15μH A B
C535	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	L907	QUY153-050Y	IM BUS WIRE	A B
C551	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	L910	QQL071J-1R0Y	INDUCTOR	1.0μH A B
C553	QCB1HK-103Y	C CAPACITOR	0.01μF,50V A B	L913	QQL071J-4R7Y	INDUCTOR	4.7μH A B
C554	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	L914	QQL071J-4R7Y	INDUCTOR	4.7μH A B
C556	QCB1HK-103Y	C CAPACITOR	0.01μF,50V A B	L915	QQL071J-4R7Y	INDUCTOR	4.7μH A B
C557	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	L916	QQL071J-4R7Y	INDUCTOR	4.7μH A B
C559	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	L917	QQL071J-4R7Y	INDUCTOR	4.7μH A B
C560	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	L918	QQL071J-4R7Y	INDUCTOR	4.7μH A B
C561	QEKJ1HM-105Z	E CAPACITOR	1μF,50V A B	L919	QQL071J-4R7Y	INDUCTOR	4.7μH A B
C562	QEKJ1HM-105Z	E CAPACITOR	1μF,50V B	L920	QQL071J-4R7Y	INDUCTOR	4.7μH A B
C563	NCB21HK-103X	C CAPACITOR	0.01μF,50V A	J901	PEMC1177	RGB21PIN SOCKET,AV1	A B
C564	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	J902	PEMC1177	RGB21PIN SOCKET,AV2	A B
C566	NCB21HK-103X	C CAPACITOR	0.01μF,50V B	J915	QNN0418-003	PIN JACK,A.OUT(L)	A B
C568	NDC21HJ-680X	C CAPACITOR	68pF,50V A B	J916	QNN0418-002	PIN JACK,A.OUT(R)	A B
C569	NDC21HJ-680X	C CAPACITOR	68pF,50V A B	J921	PU60659	MINI JACK,SAT.CTL	A B
C570	NDC21HJ-680X	C CAPACITOR	68pF,50V A B	△ TB1	LP21028-001A	TERMINAL BOARD	A B
C571	NDC21HJ-680X	C CAPACITOR	68pF,50V A B	ET1	LP30918-001A	EARTH PLATE, FOR EMC	A B
C572	NDC21HJ-680X	C CAPACITOR	68pF,50V A B	ET2	LP30915-001A	EARTH PLATE	A B
C573	NDC21HJ-680X	C CAPACITOR	68pF,50V A B	OT1	QYTD5F3008Z	TAP SCREW,X6	A B
C575	NDC21HJ-101X	C CAPACITOR	100pF,50V A B	CN511	QGF1208F1-11	FPC CONNECTOR,P/S CONV	B
C901	NCB21HK-331X	C CAPACITOR	330pF,50V A B	CN911	QGB2024J1-10S	B TO B CONNECTOR	A B
C902	NCB21HK-331X	C CAPACITOR	330pF,50V A B	CN912	QGB2024J1-12S	B TO B CONNECTOR	A B
C903	NCB21HK-471X	C CAPACITOR	470pF,50V A B	CN913	QGB2024J1-10S	B TO B CONNECTOR	A B
C904	NCB21HK-471X	C CAPACITOR	470pF,50V A B	CN914	QGB2024J1-11S	B TO B CONNECTOR	A B
C905	NCB21HK-331X	C CAPACITOR	330pF,50V A B	CN915	QGB2024J1-09S	B TO B CONNECTOR	A B
C906	NCB21HK-331X	C CAPACITOR	330pF,50V A B	CN916	QGF1208F1-04	FPC CONNECTOR,FRONT S IN	A B
C907	NCB21HK-471X	C CAPACITOR	470pF,50V A B	*****			
C908	NCB21HK-471X	C CAPACITOR	470pF,50V A B	A/C HEAD BOARD ASSEMBLY <12>			
C910	NCB21HK-102X	C CAPACITOR	0.001μF,50V A B	PW1	LPA10158-01A1	A/C HEAD BOARD ASSY	A B
C912	NCB21HK-102X	C CAPACITOR	0.001μF,50V A B	*****			
C915	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	DEMOM BOARD ASSEMBLY <14>			
C916	NCB21HK-223X	C CAPACITOR	0.022μF,50V A B	PW1	LPA10094-09A	DEMOM BOARD ASSY	A
C917	NCB21HK-223X	C CAPACITOR	0.022μF,50V A B	PW1	LPA10094-10B	DEMOM BOARD ASSY	B
C918	QCB1HK-223Y	C CAPACITOR	0.22μF,50V A B	IC6701	MSP3417G-X	IC	A B
C921	NDC21HJ-330X	C CAPACITOR	33pF,50V A B	IC6701 or	MSP3417GQGB8V3X	IC	A B
C923	QEKJ1CM-476Z	E CAPACITOR	47μF,16V A B	IC6701 or	MSP3417D-X	IC	A B
C924	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	Q6701	2SC3936/BC/-X	TRANSISTOR	A B
C925	NCB21HK-223X	C CAPACITOR	0.022μF,50V A B	D6701	1SS133-T2	SI DIODE	A B
C927	QEKJ1CM-476Z	E CAPACITOR	47μF,16V A B	D6701 or	1N4148M-T2	DIODE	A B
C928	NCB21HK-103X	C CAPACITOR	0.01μF,50V A B	R6701	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W A B
C931	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B	R6702	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W A B
C935	NCB21HK-471X	C CAPACITOR	470pF,50V A B	R6703	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W A B
C936	NCB21HK-471X	C CAPACITOR	470pF,50V A B	R6704	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W A B
C937	NCB21HK-331X	C CAPACITOR	330pF,50V A B	R6705	NRSA02J-271X	MG RESISTOR	270Ω, 1/10W A B
C938	NCB21HK-331X	C CAPACITOR	330pF,50V A B	R6707	NQR0200-003X	FERRITE BEADS	A B
C939	NCB21HK-471X	C CAPACITOR	470pF,50V A B				
C940	NCB21HK-471X	C CAPACITOR	470pF,50V A B				
C943	QEKJ1CM-107Z	E CAPACITOR	100μF,16V A B				
C945	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B				
C946	QEKJ1EM-106Z	E CAPACITOR	10μF,25V A B				
C951	QEKJ1CM-476Z	E CAPACITOR	47μF,16V A B				

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#REF No.	PART No.	PART NAME, DESCRIPTION	A B
R6708	NQR0200-003X	FERRITE BEADS	A B
R6709	NQR0200-003X	FERRITE BEADS	A B
R6710	NQR0200-003X	FERRITE BEADS	A B
R6711	NRSA02J-104X	MG RESISTOR 100kΩ,1/10W	A B
R6712	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	A B
R6713	NRSA02J-123X	MG RESISTOR 12kΩ,1/10W	A B
R6714	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	A B
R6715	NRSA02J-123X	MG RESISTOR 12kΩ,1/10W	A B
R6716	NQR0200-003X	FERRITE BEADS	A B
R6719	QRE141J-103Y	C RESISTOR 10kΩ,1/4W	A B
R6720	NRSA02J-562X	MG RESISTOR 5.6kΩ,1/10W	A B
R6721	NRSA02J-562X	MG RESISTOR 5.6kΩ,1/10W	A B
C6701	NCB21HK-103X	C CAPACITOR 0.01μF,50V	A B
C6704	NCB21HK-103X	C CAPACITOR 0.01μF,50V	A B
C6707	NDC21HJ-470X	C CAPACITOR 47pF,50V	A B
C6708	NDC21HJ-7R0X	C CAPACITOR 7pF,50V	A B
C6709	NDC21HJ-3R0X	C CAPACITOR 3pF,50V	A B
C6713	NCF21CZ-224X	C CAPACITOR 0.22μF,16V	A B
C6714	NCB21HK-222X	C CAPACITOR 0.0022μF,50V	A
C6714	NCB21HK-682X	C CAPACITOR 0.0068μF,50V	B
C6715	QEKJ1HM-225Z	E CAPACITOR 2.2μF,50V	A B
C6716	NCB21HK-222X	C CAPACITOR 0.0022μF,50V	A
C6716	NCB21HK-682X	C CAPACITOR 0.0068μF,50V	B
C6717	QEKJ1HM-225Z	E CAPACITOR 2.2μF,50V	A B
C6719	QEKJ1EM-106Z	E CAPACITOR 10μF,25V	A B
C6720	QEKJ1EM-106Z	E CAPACITOR 10μF,25V	A B
C6721	NCB21HK-103X	C CAPACITOR 0.01μF,50V	A B
C6723	NCB21HK-103X	C CAPACITOR 0.01μF,50V	A B
C6724	QEKJ1HM-225Z	E CAPACITOR 2.2μF,50V	B
L6701	QUY153-050Y	IM BUS WIRE	A B
X6701	QAX0443-001	CRYSTAL	A B
K6701	NRSA02J-330X	MG RESISTOR 33Ω,1/10W	A B
K6702	NQR0200-003X	FERRITE BEADS	A B
K6703	NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	A
K6703	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	B
K6704	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	A B
K6705	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	A
K6705	NRSA02J-100X	MG RESISTOR 10Ω,1/10W	B
K6706	NRSA02J-470X	MG RESISTOR 47Ω,1/10W	A B
K6707	NQR0200-003X	FERRITE BEADS,MS ONLY	B
BK1	LP40425-001A	BRACKET(PWB)	A B
CN6701	QGG2502K1-10	HEADER PIN	A B

S JACK BOARD ASSEMBLY <36>

PW1	LPA20009-02B	S JACK BOARD ASSY	A B
J7102	QND0084-001	S JACK	A B
CN7108	QGF1209F1-04	FPC CONNECTOR	A B

ADV. JOG BOARD ASSEMBLY <39>

PW1	LPA10191-03A	ADV JOG BOARD ASSY	A B
R7047	QRE141J-472Y	C RESISTOR 4.7kΩ,1/4W	A B
UN7001	QSW0938-001	ROTARY ENCODER,400K	A B
S7030	QSW0456-002Z	TACT SWITCH,24H EXP	A B
CN7004	QGF1209F1-04	FPC CONNECTOR,1-4	A B

#REF No.	PART No.	PART NAME, DESCRIPTION	A B
----------	----------	------------------------	-----

LOADING MOTOR BOARD ASSEMBLY <55>

PW2	LPA10158-01A2	LOADING MOTOR BOARD ASSY	A B
-----	---------------	--------------------------	-----

S-P CONV. BOARD ASSEMBLY <87> [FOR HR-S6965EF]

PW1	LPA10144-06A	S-P CONV BOARD ASSY,S->P CONV	B
IC1601	BA7046F-XE	IC	B
IC1602	74HC132D-X	IC(DIGITAL)	B
IC1603	74HC4538D-X	IC	B
IC1604	74HC74D-X	IC	B
IC1605	TDA8395	IC	B
IC1606	TDA4665T-X	IC	B
IC1607	TDA8501T/N1-X	IC	B
Q1601	2SB1218A/QR/-X	TRANSISTOR	B
Q1601 or	2SA1576A/QR/-X	TRANSISTOR	B
Q1601 or	2PA1576/R/-X	TRANSISTOR	B
Q1604	2SD1819A/QRS/-X	TRANSISTOR	B
Q1604 or	2SC4081/QRS/-X	TRANSISTOR	B
Q1604 or	2PC4081/R/-X	TRANSISTOR	B
Q1605	2SB1218A/QR/-X	TRANSISTOR	B
Q1605 or	2SA1576A/QR/-X	TRANSISTOR	B
Q1605 or	2PA1576/R/-X	TRANSISTOR	B
Q1606	2SC1740S/QRS/-T	TRANSISTOR	B
Q1607	2SD1819A/QRS/-X	TRANSISTOR	B
Q1607 or	2SC4081/QRS/-X	TRANSISTOR	B
Q1607 or	2PC4081/R/-X	TRANSISTOR	B
Q1608	2SB1218A/QR/-X	TRANSISTOR	B
Q1608 or	2SA1576A/QR/-X	TRANSISTOR	B
Q1608 or	2PA1576/R/-X	TRANSISTOR	B
Q1609	2SD1819A/QRS/-X	TRANSISTOR	B
Q1609 or	2SC4081/QRS/-X	TRANSISTOR	B
Q1609 or	2PC4081/R/-X	TRANSISTOR	B
Q1610	2SD1819A/QRS/-X	TRANSISTOR	B
Q1610 or	2SC4081/QRS/-X	TRANSISTOR	B
Q1610 or	2PC4081/R/-X	TRANSISTOR	B
Q1611	2SB1218A/QR/-X	TRANSISTOR	B
Q1611 or	2SA1576A/QR/-X	TRANSISTOR	B
Q1611 or	2PA1576/R/-X	TRANSISTOR	B
Q1612	2SD1819A/QRS/-X	TRANSISTOR	B
Q1612 or	2SC4081/QRS/-X	TRANSISTOR	B
Q1612 or	2PC4081/R/-X	TRANSISTOR	B
Q1613	2SC4083/NP/-X	TRANSISTOR	B
Q1614	2SB1218A/QR/-X	TRANSISTOR	B
Q1614 or	2SA1576A/QR/-X	TRANSISTOR	B
Q1614 or	2PA1576/R/-X	TRANSISTOR	B
Q1615	2SD1819A/QRS/-X	TRANSISTOR	B
Q1615 or	2SC4081/QRS/-X	TRANSISTOR	B
Q1615 or	2PC4081/R/-X	TRANSISTOR	B
Q1616	2SD1819A/QRS/-X	TRANSISTOR	B
Q1616 or	2SC4081/QRS/-X	TRANSISTOR	B
Q1616 or	2PC4081/R/-X	TRANSISTOR	B
Q1617	2SB1218A/QR/-X	TRANSISTOR	B
Q1617 or	2SA1576A/QR/-X	TRANSISTOR	B
Q1617 or	2PA1576/R/-X	TRANSISTOR	B
Q1619	DTA143TUA-X	DIGI TRANSISTOR	B

MODEL	MARK
HR-S6960EX	A
HR-S6965EF	B

#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B	#▲ REF No.	PART No.	PART NAME, DESCRIPTION	A B
D1601	1SS133-T2	SI DIODE	B	C1611	NDC21HJ-101X	C CAPACITOR	100pF,50V B
R1601	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W B	C1612	NCB21EK-104X	C CAPACITOR	0.1μF,25V B
R1608	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W B	C1613	NCB21EK-104X	C CAPACITOR	0.1μF,25V B
R1609	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	C1614	NDC21HJ-471X	C CAPACITOR	470pF,50V B
R1610	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	C1615	NDC21HJ-561X	C CAPACITOR	560pF,50V B
R1611	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W B	C1616	NCB21EK-104X	C CAPACITOR	0.1μF,25V B
R1612	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W B	C1631	QEKJ1CM-476Z	E CAPACITOR	47μF,16V B
R1615	NRSA02J-331X	MG RESISTOR	330Ω, 1/10W B	C1632	QEKJ1CM-476Z	E CAPACITOR	47μF,16V B
R1616	NRSA02J-474X	MG RESISTOR	470kΩ, 1/10W B	C1633	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1617	NRSA02J-474X	MG RESISTOR	470kΩ, 1/10W B	C1634	NDC21HJ-101X	C CAPACITOR	100pF,50V B
R1618	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W B	C1635	NCB21EK-104X	C CAPACITOR	0.1μF,25V B
R1619	NRSA02J-134X	MG RESISTOR	130kΩ, 1/10W B	C1636	NCB21CK-224X	C CAPACITOR	0.22μF,16V B
R1620	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W B	C1637	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1621	QRE141J-103Y	C RESISTOR	10kΩ, 1/4W B	C1638	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V B
R1622	QRE141J-103Y	C RESISTOR	10kΩ, 1/4W B	C1639	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1623	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W B	C1640	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V B
R1624	NRSA02J-124X	MG RESISTOR	120kΩ, 1/10W B	C1641	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1631	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W B	C1642	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1632	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W B	C1643	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1633	NRSA02J-223X	MG RESISTOR	22kΩ, 1/10W B	C1644	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1635	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W B	C1645	QEKJ1HM-105Z	E CAPACITOR	1μF,50V B
R1636	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	C1646	QEKJ1HM-105Z	E CAPACITOR	1μF,50V B
R1637	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W B	C1647	NCB21CK-224X	C CAPACITOR	0.22μF,16V B
R1638	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W B	C1648	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V B
R1639	NRSA02J-331X	MG RESISTOR	330Ω, 1/10W B	C1649	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1640	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W B	C1650	NCB21CK-224X	C CAPACITOR	0.22μF,16V B
R1641	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	C1651	NCB21EK-223X	C CAPACITOR	0.022μF,25V B
R1642	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W B	C1652	NDC21HJ-120X	C CAPACITOR	12pF,50V B
R1643	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W B	C1653	NCB21CK-224X	C CAPACITOR	0.22μF,16V B
R1644	NRSA02J-331X	MG RESISTOR	330Ω, 1/10W B	C1654	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1645	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W B	C1655	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V B
R1646	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W B	C1656	NCB21HK-103X	C CAPACITOR	0.01μF,50V B
R1647	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W B	L1601	QQL29BJ-100Z	P COIL	10μH B
R1648	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	L1602	QQL29BJ-100Z	P COIL	10μH B
R1651	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W B	L1603	QQL29BJ-100Z	P COIL	10μH B
R1652	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	L1604	QQL29BJ-100Z	P COIL	10μH B
R1653	NRSA02J-184X	MG RESISTOR	180kΩ, 1/10W B	FL1601	QQR1187-001	EQ	B
R1654	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W B	FL1602	QQR1187-001	EQ	B
R1655	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	X1601	QAX0613-001Z	CRYSTAL	4.433619MHz B
R1656	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W B	BK1	LP30950-001A	BRACKET(1)	B
R1657	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W B	BK2	LP30951-001A	BRACKET(2)	B
R1658	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W B	OT1	PU59915-105	#500SPACER0.01, FOR X1601	B
R1659	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W B	CN1601	QGF1208F1-11	FPC CONNECTOR	B
R1660	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W B				
R1661	NRSA02J-333X	MG RESISTOR	33kΩ, 1/10W B				
VR1601		QVP0039-471Z	TRIM RESISTOR B				
VR1602		QVP0039-471Z	TRIM RESISTOR B				
VR1603		QVP0039-104Z	TRIM RESISTOR B				
B1601	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W B				
B1602	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W B				
B1603	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W B				
B1607	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W B				
B1608	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W B				
C1601	QEKJ1CM-476Z	E CAPACITOR	47μF,16V B				
C1602	NCB21HK-103X	C CAPACITOR	0.01μF,50V B				
C1605	QEKJ1HM-105Z	E CAPACITOR	1μF,50V B				
C1606	NCB21HK-102X	C CAPACITOR	0.001μF,50V B				
C1607	NCB21HK-103X	C CAPACITOR	0.01μF,50V B				
C1608	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V B				
C1609	NCB21HK-222X	C CAPACITOR	0.0022μF,50V B				
C1610	QEKJ1HM-105Z	E CAPACITOR	1μF,50V B				



JVC

VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY. 12,3-chome,Moriya-cho,Kanagawa-ku,Yokohama,Kanagawa-prefecture,221-8528,Japan



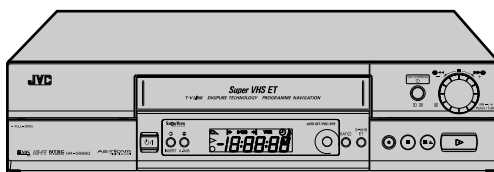
Printed in Japan
0306 VP

JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-S8960Ex, HR-S8965EK, HR-S8960AG



Hi-Fi **S****VHS**
625
Super VHS ET
SHOWVIEW
DELUXE

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).

SPECIFICATIONS *(The specifications shown pertain specifically to the model HR-S8960EX.)*

GENERAL

Power requirement : AC 220 V – 240 V~, 50 Hz/60 Hz
Power consumption
Power on : 18 W
Power off : 3.3 W
Temperature
Operating : 5°C to 40°C
Storage : -20°C to 60°C
Operating position : Horizontal only
Dimensions (WxHxD)
: 400 mm x 94 mm x 270 mm
Weight : 3.3 kg
Format : S-VHS/VHS PAL standard
Maximum recording time
(SP) : 240 min. with E-240 video cassette
(LP) : 480 min. with E-240 video cassette
(EP) : 720 min. with E-240 video cassette

VIDEO/AUDIO

Signal system : PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields
Recording system : DA4 (Double Azimuth) head helical scan system
Signal-to-noise ratio: 45 dB
Horizontal resolution
(SP/LP) : 250 lines (VHS)
400 lines (S-VHS)
(EP) : 220 lines (VHS)
350 lines (S-VHS)
Frequency range : 70 Hz to 10,000 Hz (Normal audio)
20 Hz to 20,000 Hz (Hi-Fi audio)

Input/Output : 21-pin SCART connectors:
IN/OUT x 1, IN/DECODER x 1
RCA connectors:
VIDEO IN x 1, AUDIO IN x 1,
AUDIO OUT x 1
S-Video connector:
IN x 1, OUT x 1

TUNER/TIMER

TV channel storage capacity : 99 positions (+AUX position)
Tuning system : Frequency synthesized tuner
Channel coverage : VHF 47 MHz – 89 MHz/
104 MHz – 300 MHz/
302 MHz – 470 MHz
UHF 470 MHz – 862 MHz
Aerial output : UHF channels 22 – 69 (Adjustable)
Memory backup time : Approx. 10 min.

ACCESSORIES

Provided accessories : RF cable,
Satellite Controller
Infrared remote control unit,
"R6" battery x 2

Specifications shown are for SP mode unless otherwise specified.

E.& O.E. Design and specifications subject to change without notice.

HR-S8960EX,HR-S8965EK,HR-S8960AG V16S25

TABLE OF CONTENTS

Section	Title	Page	Section	Title	Page	
Important Safety Precautions						
INSTRUCTIONS						
1. DISASSEMBLY						
1.1	Manually removing the cassette tape	1-1	3.3.3	Audio circuit	3-5	
1.2	Removing the major parts	1-2	3.3.3.1	Audio REC FM	3-5	
1.2.1	How to read the procedure table	1-2	3.3.4	Syscon circuit	3-6	
1.2.2	Disassembly procedure	1-2	3.3.4.1	Timer clock	3-6	
1.3	Emergency display function	1-4	4. CHARTS AND DIAGRAMS			
1.3.1	Displaying the EMG information	1-4	4.1	BOARD INTERCONNECTIONS	4-3	
1.3.2	Clearing the EMG history	1-4	4.2	MAIN(VIDEO/N.AUDIO) SCHEMATIC DIAGRAM	4-5	
1.3.3	Details of the OSD display in the EMG display mode	1-5	4.3	MAIN(FMA) SCHEMATIC DIAGRAM	4-7	
1.3.4	EMG content description	1-6	4.4	MAIN(SYSCON) SCHEMATIC DIAGRAM	4-9	
1.3.5	EMG detail information<1>	1-7	4.5	MAIN(SW.REG) SCHEMATIC DIAGRAM	4-11	
1.3.6	EMG detail information<2>	1-8	4.6	MAIN(TUNER) SCHEMATIC DIAGRAM	4-13	
1.3.7	EMG detail information<3>	1-8	4.7	MAIN(FRONT) AND ADV.JOG SCHEMATIC DIAGRAMS	4-15	
1.4	Service position	1-9	4.8	MAIN(ON SCREEN) SCHEMATIC DIAGRAM	4-17	
1.4.1	How to set the "Service position"	1-9	4.9	MAIN(MAIN TERM.) SCHEMATIC DIAGRAM	4-18	
1.5	Jig RCU mode	1-9	4.10	3D/TBC (2M) SCHEMATIC DIAGRAM	4-19	
1.5.1	Setting the Jig RCU mode	1-9	4.11	TERMINAL(S-SUB) SCHEMATIC DIAGRAM	4-21	
1.5.2	Setting the User RCU mode	1-9	4.12	TERMINAL(I/O) SCHEMATIC DIAGRAM	4-23	
1.6	Mechanism service mode	1-9	4.13	DEMULATOR SCHEMATIC DIAGRAM	4-25	
1.6.1	How to set the "Mechanism service mode"	1-9	4.14	TERMINAL CIRCUIT BOARD	4-27	
1.6.2	How to exit from the "Mechanism service mode"	1-9	4.15	DEMULATOR CIRCUIT BOARD	4-28	
1.7	Maintenance and inspection	1-10	4.16	MAIN CIRCUIT BOARD [FOR HR-S8960AG]	4-29	
1.7.1	Cleaning	1-10	4.17	MAIN CIRCUIT BOARD [FOR HR-S8960EX AND HR-S8965EK]	4-33	
1.7.2	Lubrication	1-10	4.18	3D DIGITAL/2M CIRCUIT BOARD	4-35	
1.7.3	Suggested servicing schedule for main components	1-10	4.19	VOLTAGE CHARTS	4-36	
1.8	Sevicing items related to video navigation	1-10	4.20	WAVEFORMS	4-37	
2. MECHANISM			4.21	REMOTE CONTROLLER SCHEMATIC DIAGRAM	4-39	
Refet to the SERVICE MANUAL No.86700 (MECHANISM ASSEMBLY)			4.22	FDP GRID ASSIGNMENT AND ANODE CONNECTION	4-39	
3. ADJUSTMENT			4.23	CPU PIN FUNCTION	4-40	
3.1	Before adjustment	3-1	4.24	SYSTEM CONTROL BLOCK DIAGRAM	4-41	
3.1.1	Precaution	3-1	4.25	VIDEO BLOCK DIAGRAM	4-43	
3.1.2	Required test equipments	3-1	4.26	AUDIO BLOCK DIAGRAM	4-47	
3.1.3	Required adjustment tools	3-1	5. PARTS LIST			
3.1.4	Color(colour) bar signal, color(colour) bar pattern	3-1	5.1	EXPLODED VIEW	5-1	
3.1.5	Switch settings	3-1	5.1.1	PACKING AND ACCESSORY ASSEMBLY<M1>	5-1	
3.1.6	Manual tracking mode (Auto tracking ON/OFF) setting	3-2	5.1.2	FINAL ASSEMBLY<M2>	5-2	
3.1.7	EVR sdjustment	3-2	5.1.3	MECHANISM ASSEMBLY<M4>	5-3	
3.2	Mechanism compatibility adjustment	3-2	5.2	PARTS LIST	5-4	
3.2.1	Tension pole position	3-2	PACKING AND ACCESSORY ASSEMBLY<M1>			5-4
3.2.2	FM waveform linearity	3-3	FINAL ASSEMBLY<M2>			5-4
3.2.3	Height and tilt of the A/C head	3-3	MECHANISM ASSEMBLY<M4>			5-4
3.2.4	A/C head phase(X-value)	3-4	MAIN BOARD ASSEMBLY<03> (incl. 3D D/2M,TERM.,DEMOM)			5-5
3.3	Electrical Adjustment	3-4	3D DIGITAL/2M BOARD ASSEMBLY<05>			5-12
3.3.1	Servo circuit	3-4	TERMINAL BOARD ASSEMBLY<06>			5-13
3.3.1.1	Switching point	3-4	A/C HEAD BOARD ASSEMBLY<12>			5-15
3.3.1.2	Slow tracking preset	3-5	DEMOM BOARD ASSEMBLY<14>			5-15
3.3.2	Video circuit	3-5	S.JACK BOARD ASSEMBLY<36>			5-16
3.3.2.1	EE Y/PB Y(S-VHS/VHS)level	3-5	ADV.JOG BOARD ASSEMBLY<39>			5-16
			LOADING MOTOR BOARD ASSEMBLY<55>			5-16

The following table indicates main different points between models HR-S8960EX, HR-S8965EK and HR-S8960AG.

ITEM	MODEL	HR-S8960EX	HR-S8965EK	HR-S8960AG
POWER VOLTAGE		220-240V	←	110-240V
POWER SAVE		USED	←	NOT USED
JOG SHUTTLE	ADV.JOG with SPUTTERING		←	ADV.JOG
MBR	NOT USED		←	USED(TV,CABLE/SAT/DVD)
SATTELITE CONTROLLER	USED		←	NOT USED
S CABLE	OPTIONAL		←	PROVIDED
VIDEO SYSTEM(MESECAM)	USED(MANUAL)		NOT USED	USED
VIDEO SYSTEM(NTSC)	PLAYBACK ONLY		←	USED
16:9(WIDE SCREEN)	USED		←	NOT USED
L-1 in	SCART		←	S,RCA
L-2 in	SCART(DECODER)		SCART	NOT USED
BROADCASTING STANDARD	B/G,D/K		I	B/G,D/K,I
BACKUP TIME	10 MINUITES		←	6 MONTHS
AUTO CLOCK	USED		←	NOT USED
VCR PLUS+	SHOWVIEW DELUXE	VIDEOplus+ DELUXE		G-CODE/SHOWVIEW
AUTO GUIDE CHANNEL SET	USED		←	NOT USED
REC LINK	USED(L-2)		←	USED(L-1)
OSD LANGUAGE	13 LANGUAGES		ENGLISH	ENGLISH,CHINESE
TV-LINK	USED		←	NOT USED

Notes: Mark ← is same as left.

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the $\triangle$ symbol and shaded (■) parts are critical for safety.

Replace only with specified part numbers.

Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:

- 1) Wires covered with PVC tubing
- 2) Double insulated wires
- 3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:

- | | | |
|--------------------|--------------------------------------|------------|
| 1) Insulation Tape | 3) Spacers | 5) Barrier |
| 2) PVC tubing | 4) Insulation sheets for transistors | |

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

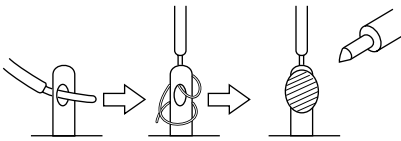


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

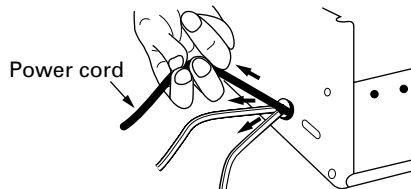


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector

In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

1) **Connector part number** : E03830-001

2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.

3) **Replacement procedure**

(1) Remove the old connector by cutting the wires at a point close to the connector.

Important : Do not reuse a connector (discard it).

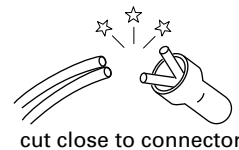


Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

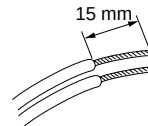


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

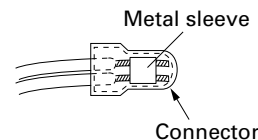


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.



Fig.6

(5) Check the four points noted in Fig.7.

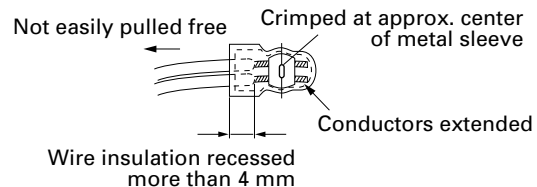


Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

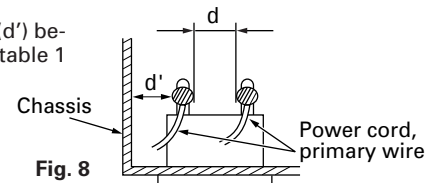
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

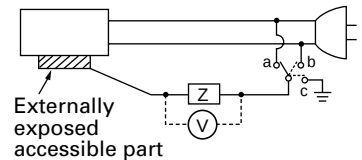


4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method: (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

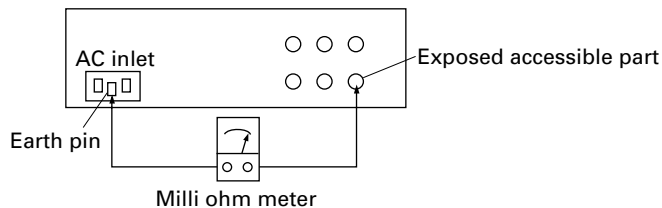


5. Grounding (Class I model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	$Z \leq 0.1 \text{ ohm}$
Europe & Australia	$Z \leq 0.5 \text{ ohm}$

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	$R \geq 1 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3 \text{ mm}$
100 to 240 V			AC 1.5 kV 1 minute	$d, d' \geq 4 \text{ mm}$
110 to 130 V	USA & Canada	$1 \text{ M}\Omega \leq R \leq 12 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3.2 \text{ mm}$
110 to 130 V	Europe & Australia	$R \geq 10 \text{ M}\Omega/500 \text{ V DC}$	AC 3 kV 1 minute (Class II)	$d \geq 4 \text{ mm}$
200 to 240 V			AC 1.5 kV 1 minute (Class I)	$d' \geq 8 \text{ mm (Power cord)}$ $d' \geq 6 \text{ mm (Primary wire)}$

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan		$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada		$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia		$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
			$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SECTION 1 DISASSEMBLY

1.1 Manually removing the cassette tape

If you cannot remove the cassette tape which is loaded because of any electrical or mechanical failures, manually remove it by taking the following steps.

- (1) Unplug the power cord plug from the power outlet.
- (2) Refer to the disassembly procedure of the VCR and perform the disassembly of the major parts before removing the mechanism assembly. (See Fig. 1-1a)

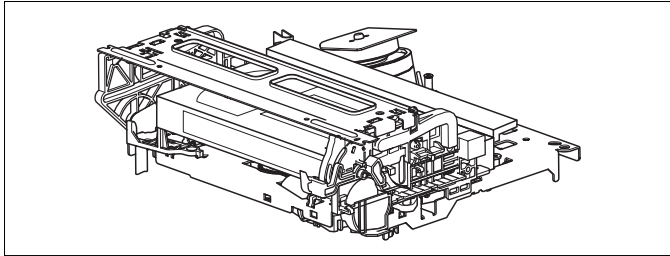


Fig. 1-1a

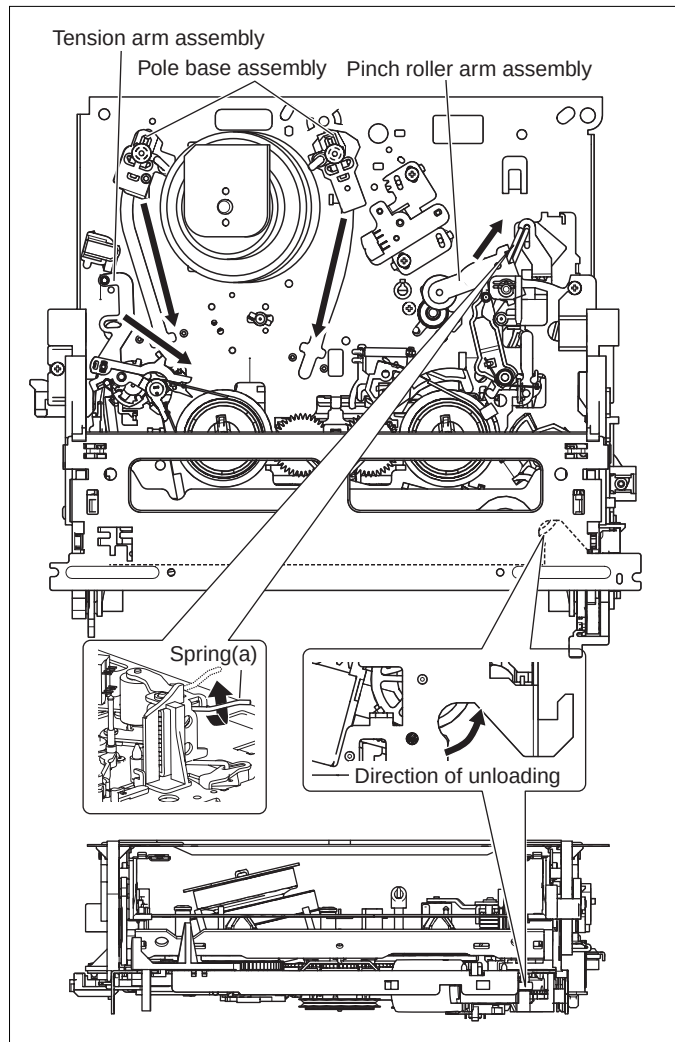


Fig. 1-1b

- (3) Unload the pole base assembly by manually turning the gear of the loading motor until the pole base assembly is hidden behind the cassette lid. In doing so, hold the tape by the hand to keep the slack away from any grease. (See Fig. 1-1b.) In case of mechanical failures, while keeping the tension arm assembly free from tension, pull out the tape on the pole base assembly. Take the spring(a) of the pinch roller arm assembly off the hook, and detach it from the tape.
- (4) Remove the screw (a) of the side frame (L/R).
- (5) Hold the slack tape and cassette cover together, lift the cassette tape, top frame, cassette holder and side frames (L, R) together from the rear and remove them by disengaging the hooks (a) and (b).

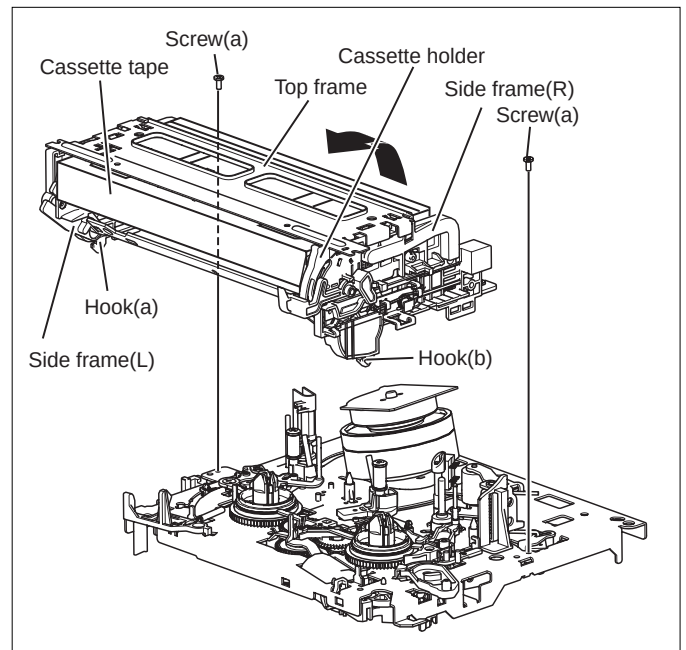


Fig. 1-1c

- (6) Take up the slack of the tape into the cassette. This completes removal of the cassette tape.

1.2 Removing the major parts

1.2.1 How to read the procedure table

This table shows the steps for disassembly of the externally furnished parts and board assemblies. Reverse these steps when re-assembling them.

<Example>

Step/ LocNo.	Part Name	Fig. No.	Point	Note
[1]	Top cover, Bracket	1-3a	4(S1a),(S1b),3(L1a), 2(SD1a),(P1a),(W1a), CN1(WR1a), 2(S1c)	<Note 1a>
(1)	(2)	(3)	(4)	(5)

(1) Order of steps in Procedure

When reassembling, perform the step(s) in the reverse order.
These numbers are also used as the identification (location) No. of parts Figures.

(2) Part name to be removed or installed.

(3) Fig. No. showing procedure or part location.

(4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.

P= Spring, W= Washer, S= Screw, L= Locking tab, SD= Solder, CN**(WR**)= Remove the wire (WR**) from the connector (CN**).

Note:

- **The bracketed () WR of the connector symbol are assigned nos. in priority order and do not correspond to those on the spare parts list.**

(5) Adjustment information for installation

1.2.2 Disassembly procedure

Step/ LocNo.	Part Name	Fig. No.	Point	Note
[1]	Top cover	1-2-2d	4(S1a), (S1b)	
[2]	Front panel assembly (ADV. Jog board assembly) (Front S jack board assembly)	1-2-2d	CN7001(WR2a), CN916(WR2b), 2(S2a), 2(L2a),4(L2b), 3(L2c) 2(S2b), Knob assembly 2(S2c)	<Note 2a> <Note 2b>
[3]	Mechanism assembly (Drum assembly) (Inertia plate) (Roller arm assembly) (H. cleaner assembly) (HR-S8960AG only)	1-2-2d	CN2001(WR3a), (S3a), (S3b) CN1(WR3b), (S3x), (S3y), (S3z) 4(L3a) (P3a), (L3b) 2(L3c)	<Note 2a> <Note 3a> <Note 3b> <Note 3c>
[4]	Main board assembly	1-2-2d	(HR-S8960EX,S8965EK) 3(S4a), (L4a) (HR-S8960AG) (L4a)	
[5]	Bottom cover (HR-S8960EX,HR-S8965EK only)	1-2-2d	3(L5a), 5(L5b), 2(L5c)	

<Note 2a>

- Be careful not to damage the connector and wire etc. during connection and disconnection.
- When connecting the flat wire to the connector, be careful with the flat wire direction.

<Note 2b>

- When reattaching the Front panel assembly, make sure that the door opener of the Side frame (R) is lowered in position prior to the reinstallation.
- When reattaching the Front panel assembly, pay careful attention to the switch lever of the Front panel assembly not to make it touch the switch knob of the Main board assembly from the side.
- When reattaching the Front panel assembly, lift the Cassette door slightly.

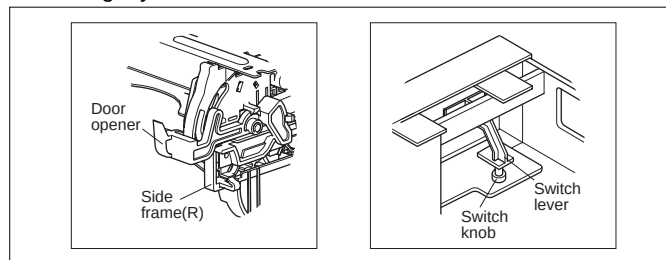


Fig. 1-2-2a

<Note 3a>

- When reattaching the Mechanism assembly, secure the screws (S3a to S3b) in the order of a, b.

<Note 3b>

- When reattaching the Mechanism assembly, be sure to align the phase of the Rotary encoder on the Main board assembly.
- When reattaching the Mechanism assembly, set the "Mechanism assembling mode". (See "section 2 mechanism".)
- When reattaching the Mechanism assembly to the Main board assembly, take care not to damage the sensors and switch on the Main board assembly.

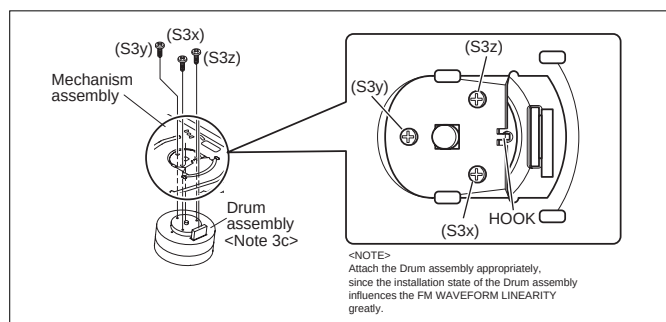


Fig. 1-2-2b

<Note 3c>

- When reattaching the Drum assembly, secure the screws (S3x to S3z) in the order of x, y, z.
- When handling the drum assembly alone, hold it by the motor or shaft. Be careful not to touch other parts, especially the video heads. Also take care not to damage the connectors.

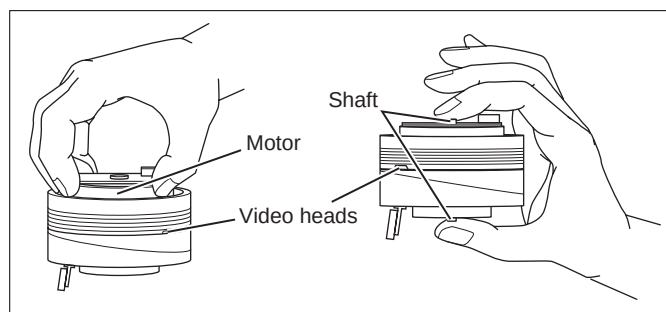


Fig. 1-2-2c

1.3 Emergency display function

This unit saves details of the last two emergencies as the EMG history and allows the status of the VCR and the mechanism of each emergency to be shown both on the display and as OSD information.

When using the emergency function, it is required to set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received).

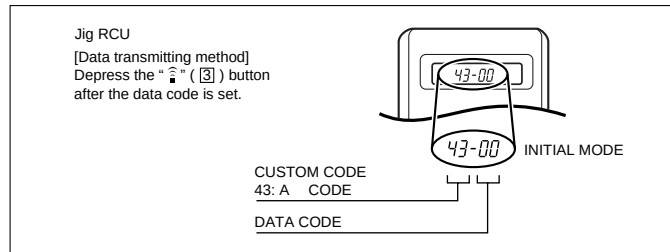


Fig. 1-3a Jig RCU [PTU94023B]

1.3.1 Displaying the EMG information

The EMG detail of information can be displayed by transmitting the code "59" from the Jig RCU.

Note:

- **The EMG detail information <1><2> show the information on the latest EMG.**
It becomes " - - : - - : - - " when there is no latest EMG record.

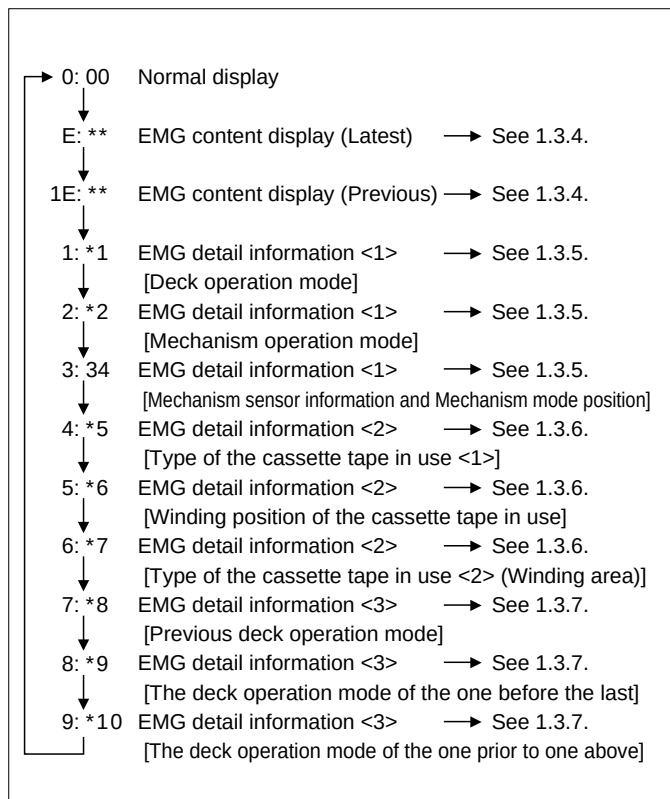


Fig. 1-3-1a EMG display of 7segment LED display model

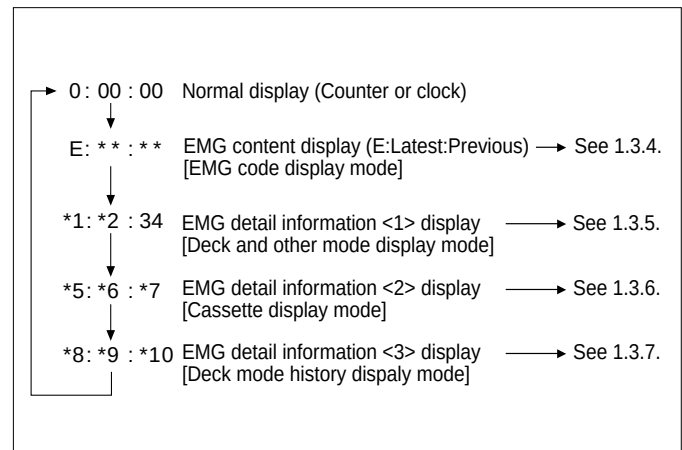
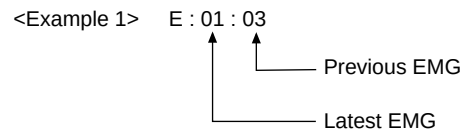


Fig. 1-3-1b EMG display of FDP display model

<Reference> EMG display of FDP display mode

- (1) Transmit the code "59" from the Jig RCU.
The FDP shows the EMG content in the form of "E: ** : **".



- <Example 2> E : - - : - - ← No EMG record

- (2) Transmit the code "59" from the Jig RCU again.
The FDP shows the EMG detail information <1> in the form of " *1 : *2 : 34 ".
 *1 : Deck operation mode at the moment of EMG
 *2 : Mechanism operation mode at the moment of EMG
 3- : Mechanism sensor information at the moment of EMG
 -4 : Mechanism mode position at the moment of EMG
- (3) Transmit the code "59" from the Jig RCU once again.
The FDP shows the EMG detail information <2> in the form of " *5 : *6 : *7 ".
 *5 : Type of the cassette tape in use <1> .
 *6 : Winding position of the cassette tape in use
 *7 : Type of the cassette tape in use <2> (Winding area)
- (4) Transmit the code "59" from the Jig RCU once again.
The FDP shows the EMG detail information <3> in the form of " *8 : *9 : *10 ".
 *8 : Previous deck operation mode at the moment of EMG
 *9 : The deck operation mode of the one before the last at the moment of EMG
 *10 : The deck operation mode of the one prior to one above at the moment of EMG
- (5) Transmit the code "59" from the Jig RCU once again to reset the display.

1.3.2 Clearing the EMG history

- (1) Display the EMG history.
- (2) Transmit the code "36" from the Jig RCU.
- (3) Reset the EMG display.

1.3.3 Details of the OSD display in the EMG display mode

During the EMG display, the OSD shows the data on the deck mode, etc. The details of the display contents are as follows.

Notes:

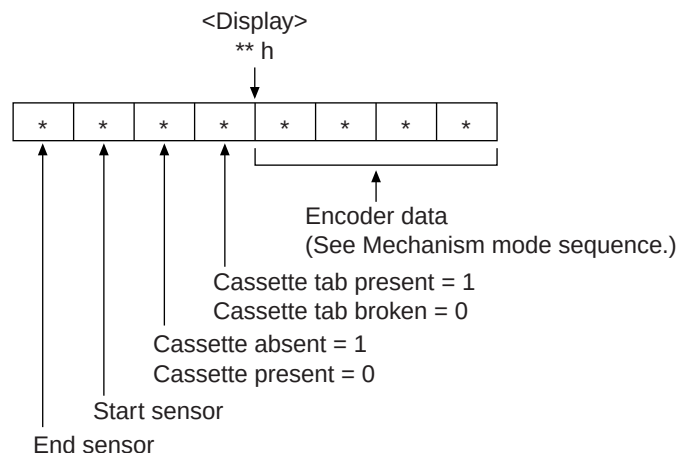
- The display is variable depending on the part No. of the System Control microcomputer (IC3001) built into the VCR. In the following, refer to the figure carrying the same two characters as the top two characters of the part number of your IC.
- The sensor information in the OSD display contents is partially different from the mechanism sensor information in EMG detail information <1>.

[For MN* only]

AA	BB	CC	DD	EE
FF	GG	HH	II	JJ
KK	LL	MM	NN	OO
PP	QQ	RR	SS	TT
UU	VV	WW	XX	YY

AA : Deck operation mode (See EMG detail information <1>.)
BB : Mechanism operation mode (See EMG detail of information <1>.)
CC : Mechanism transition flag
DD : Capstan motor control status
EE : Loading motor control status
FF : Sensor information (See sensor information details.)
GG : Capstan motor speed
HH : Key code (JVC code)
II : Supply reel winding diameter data, higher 8 bits.
JJ : Supply reel winding diameter data, lower 8 bits.
KK : Mechanism sensor information & mechanism mode position (See EMG detail of information <1>.)
LL : Tape speed data, higher 8 bits.
MM : Tape speed data, lower 8 bits.
NN : Cassette tape type <2>, higher 8 bits. (See EMG detail of information <2>.)
OO : Cassette tape type <2>, lower 8 bits. (See EMG detail of information <2>.)
PP : General data display area
YY : General data display area

*FF: Sensor information details

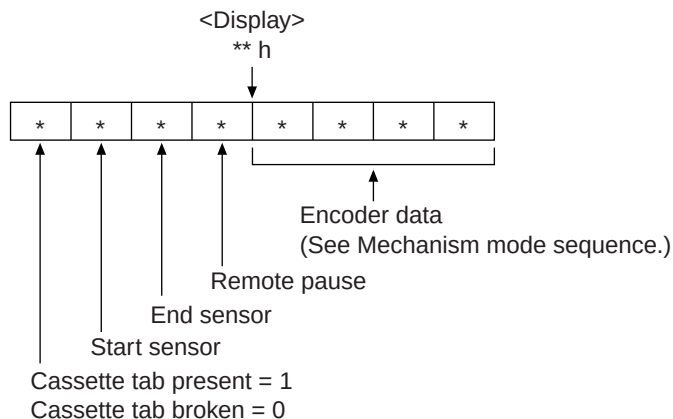


[For *HD only]

AA	BB	CC
DD	EE	FF
GGGG	HHHH	
II	JJJJ	
KKKK	LLLL	MMMM
ROM No.		

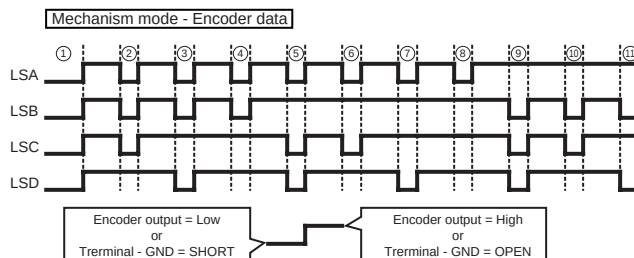
AA : Key code (JVC code)
BB : Deck operation mode (See EMG detail information <1>.)
CC : Mechanism operation mode (See EMG detail information <1>.)
DD : Sensor information (See sensor information details.)
EE : Capstan motor speed (Search, double speed)
FF : Tracking value
GGGG : Cassette tape type <2>, 16 bits. (See EMG detail information <2>.)
HHHH : Supply reel winding diameter data
II : Capstan motor speed (FF/REW, double speed)
JJJJ : Tape speed data, lower 8 bits.
KKKK : General data display area
LLLL : General data display area
MMMM : General data display area

*DD: Sensor information details

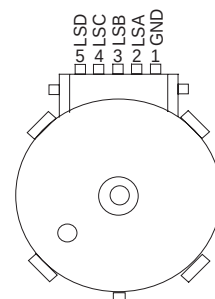


[For both MN*/HD*]

Mechanism mode sequence



No.	Position	Encoder data
①	EJECT	0 h = 0000
②	EJECT1	1 h = 0001
③	EJECT2	2 h = 0010
④	ULSTOP	3 h = 0011
⑤	UPPER	4 h = 0100
⑥	ONSTOP(PLAY)	5 h = 0101
⑦	FWD/SS	6 h = 0110
⑧	REV/SS	7 h = 0111
⑨	OFFSTOP	8 h = 1000
⑩	FFREW-BRAKE	9 h = 1001
⑪	FFREW	A h = 1010
⑫	MIDDLE	F h = 1111



1.3.4 EMG content description

Note: EMG contents “E08/E09” are for the model with Dynamic Drum (DD).

FDP	CONTENT	CAUSE
E01: Loading EMG	If the mechanism mode does not change to the next mode within 4 seconds after the loading motor starts rotating in the loading direction, while the mechanism is in the after-loading position (with the tape up against the pole base), [E:01] is identified and the power is switched OFF. However, if the tape loading is not completed within 4 seconds after the loading motor starts rotating in the loading direction, the tape is simply unloaded and ejected. No EMG data is recorded in this case.	1. The mechanism is locked in the middle of the mode transition during a tape loading operation. 2. The mechanism overruns during the tape loading operation because the SYSCON cannot recognize the mechanism mode normally. This problem is due to a cause such as a rotary encoder failure. 3. Power is not supplied to the loading MDA. (M12V/Vcc/Vref/ICP are disconnected in the middle.)
E02: Unloading EMG	When the mechanism mode cannot be changed to another mode even when the loading motor has rotated for more than 4 seconds in the unloading direction, [E:02] is identified and the power is turned off.	1. The mechanism is locked in the middle of mode transition. 2. Without an eject signal being sent from the SYSCON, unloading is attempted (i.e. Ejection is attempted while the tape is still inside the mechanism.) because the SYSCON cannot recognize the mechanism mode normally. This is due to a cause such as a rotary encoder failure. (Mechanism position: UPPER) 3. Power is not supplied to the loading MDA. (M12V/Vcc/Vref/ICP are disconnected in the middle.)
E03: Take Up Reel Pulse EMG	When the falling edge of the take-up reel pulse has not been generated for more than 4 seconds in the capstan rotating mode, [E:03] is identified, the pinch rollers are turned off and stopped, and the power is turned off. In this case, however, the mechanism should be in position after tape loading. Note that the reel EMG is not detected during Slow/Frame advance operations.	1. The take-up reel pulse is not generated in the FWD transport modes (PLAY/FWD SEARCH/FF, etc.) because; 1) The idler gear is not meshed with the take-up reel gear because the mechanism malfunctions for some reason. 2) The idler gear is meshed with the take-up reel gear, but incapable of winding due to too large mechanical load (abnormal tension); 3) The reel is rotating normally but an FG pulse is not generated due to the take-up reel sensor failure. 2. The supply reel pulse is not generated in the REV transport modes (REV SEARCH/REW, etc.) because; 1) The idler gear is not meshed with the supply reel gear because the mechanism malfunctions for some reason. 2) The idler gear is meshed with the supply reel gear, but incapable of winding due to too large a mechanical load (abnormal tension); 3) The reel rotates normally but the FG pulse is not generated due to a supply reel sensor failure. 3. Power(SW5V) is not supplied to the reel sensor on the tape winding side.
E04: Drum FG EMG	When the drum FG pulse has not been input for more than 3 seconds in the drum rotating mode, [E:04] is identified, the pinch rollers are turned off and stopped, and the power is turned off.	1. The drum could not start or the drum rotation has stopped due to too large a load on the tape, because; 1) The tape tension is abnormally high; 2) The tape is damaged or a foreign object (grease, etc.) adheres to the tape. 2. The drum FG pulse did not reach the System controller CPU because; 1) The signal circuit is disconnected in the middle; 2) The FG pulse generator (hall device) of the drum is faulty. 3. The drum control voltage (DRUM CTL V) is not supplied to the MDA. 4. Power (M12V) is not supplied to the drum MDA.
E05: Cassette Eject EMG	If the cassette does not reach the eject position within about 0.7 seconds after the cassette housing has started the cassette ejection operation, [E:05] is identified, the drive direction is reversed to load the tape, the mode is switched to STOP mode with the pinch roller OFF, and the power is switched OFF. During the cassette insertion process, the drive direction is reversed and the cassette is ejected if the tape is not up against the pole base within about 3 seconds after the start of the cassette pulling-in operation. If the cassette does not reach the eject position within about 0.7 seconds after the drive mode reversal operation, [E:05] is identified and the power is switched OFF immediately.	1. The cassette cannot be ejected due to a failure in the drive mechanism of the housing. 2. When the housing load increases during ejection, the loading motor is stopped because of lack of headroom in its drive torque. - Housing load increasing factors: Temperature environment (low temperature, etc.), mechanism wear or failure. 3. The sensor/switch for detecting the end of ejection are not functioning normally. 4. The loading motor drive voltage is lower than specified or power (M12V) is not supplied to the motor (MDA). 5. When the user attempted to eject a cassette, a foreign object (or perhaps the user's hand) was caught in the opening of the housing.
E06: Capstan FG EMG	When the capstan FG pulse has not been generated for more than 1 second in the capstan rotating mode, [E:06] is identified, the pinch rollers are turned off and stopped, and the power is turned off. However, the capstan EMG is not detected in SLOW/STILL modes. Note that, if the part number of the System Control IC begins with "MN" or "M3", the capstan EMG is not detected even during the FF/REW operation.	1. The capstan could not start or the capstan rotation has stopped due to too large a load on the tape, because; 1) The tape tension is abnormally high (mechanical lock); 2) The tape is damaged or a foreign object (grease, etc.) is adhered to the tape (occurrence of tape entangling, etc.). 2. The capstan FG pulse did not reach the System controller CPU because; 1) The signal circuit is disconnected in the middle; 2) The FG pulse generator (MR device) of the capstans is faulty. 3. The capstan control voltage (CAPSTAN CTL V) is not supplied to the MDA. 4. Power (M12V, SW5V) are not supplied to the capstan MDA.
E07: SW Power Short-Circuit EMG	When short-circuiting of the SW power supply with GND has lasted for 0.5 second or more, [E:07] is identified, all the motors are stopped and the power is turned off.	1. The SW 5 V power supply circuit is shorted with GND. 2. The SW 12 V power supply circuit is shorted with GND.
E08: DD Initialized (Absolute Position Sensor) EMG	When DD tilting does not complete in 4 seconds, [E:08] is identified, the tilt motor is stopped and the power is turned off.	1. The absolute value sensor is defective. (The soldered parts have separated.) 2. The pull-up resistor at the absolute sensor output is defective. (The soldered parts have separated.) 3. Contact failure or soldering failure of the pins of the connector (board-to-board) to the absolute value sensor. 4. The absolute value sensor data is not sent to the System Controller CPU.
E09: DD FG EMG	When the DD FG pulse is not generated within 2.5 seconds, [E:09] is identified, the tilt motor is stopped and the power is turned off.	1. The FG sensor is defective. (The soldered parts have separated.) 2. The pull-up resistor at the FG sensor output is defective. (The soldered parts have separated.) 3. Contact failure or soldering failure of the pins of the connector (board-to-board) to the FG sensor. 4. The power (5V) to the sensor is not supplied. (Connection failure/soldering failure) 5. The FG pulse is not sent to the System Controller CPU. 6. The tilt motor is defective. (The soldered parts have separated.) 7. The drive power to the tilt motor is not supplied. (Connection failure/soldering failure) 8. The tilt motor drive MDA - IC is defective. 9. Auto-recovery of the DD tilting cannot take place due to overrun.
E0A: Supply Reel Pulse EMG	When the falling edge of the supply reel pulse has not been generated for more than 10 seconds in the capstan rotating mode, [E:0A] is identified and the cassette is ejected (but the power is not turned off). In this case, however, the mechanism should be in the position after tape loading (with the tape up against the pole base). Also note that the reel EMG is not detected during Slow/Frame advance operations.	1. The supply reel pulse is not generated in the FWD transport mode (PLAY/FWD SEARCH/FF, etc.) because; 1) PLAY/FWD or SEARCH/FF is started while the tape in the inserted cassette is cut in the middle; 2) A mechanical factor caused tape slack inside and outside the supply reel side of the cassette shell. In this case, the supply reel will not rotate until the tape slack is removed by the FWD transport, so the pulse is not generated until then; 3) The reel is rotating normally but the FG pulse is not generated due to a supply reel sensor failure. 2. The take-up reel pulse is not generated in the REV transport mode (REV SEARCH/REW, etc.). 1) REV SEARCH/REW is started when the tape in the inserted cassette has been cut in the middle; 2) A mechanical factor caused tape slack inside and outside the take-up reel side of the cassette shell. In this case, the take-up reel will not rotate until the tape slack is removed by the REV transport, so the pulse will not be generated until that time; 3) The reel is rotating normally but the FG pulse is not generated due to a take-up reel sensor failure. 3. The power (SW 5V) to a reel sensor is not supplied.
EU1: Head clog warning history	Presupposing the presence of the control pulse output in the PLAY mode, when the value obtained by mixing the two V.FM output channels (without regard to the A.FM output) has remained below a certain threshold level for more than 10 seconds, [E:U1] is identified and recorded in the emergency history. During the period in which the head clog is detected, the FDP shows "U:01" and the OSD repeats the "3 seconds of warning display" and the "7 seconds of noise picture display" alternately. EMG code : "E:C1" or "E:U1" / FDP : "U:01" / OSD : "Try cleaning tape." or "Use cleaning cassette." The head clog warning is reset when the above-mentioned threshold has been exceeded for more than 2 seconds or the mode is changed to another mode than PLAY.	

1.3.5 EMG detail information <1>

The status (electrical operation mode) of the VCR and the status (mechanism operation mode/sensor information) of the mechanism in the latest EMG can be confirmed based on the figure in EMG detail information <1> .

[FDP/OSD display]

*1 : *2 : 34

- *1 : Deck operation mode at the moment of EMG
- *2 : Mechanism operation mode at the moment of EMG
- 3— : Mechanism sensor information at the moment of EMG
- 4 : Mechanism mode position at the moment of EMG

Note:

- **For EMG detailed information <1>, the content of the code that is shown on the display (or OSD) differs depending on the parts number of the system control microprocessor (IC3001) of the VCR. The system control microprocessor parts number starts with two letters, refer these to the corresponding table.**

*1 : Deck operation mode

[Common table of MN* and HD]

Display		Deck operation mode
MN*	HD*	
00	-	Mechanism being initialized
01	00	STOP with pinch roller pressure off (or tape present with P.OFF)
02	01	STOP with pinch roller pressure on
03	-	POWER OFF as a result of EMG
04	04	PLAY (Normal playback)
0C	0E	REC
10	11	Cassette ejected
20	22	FF
21	-	Tape fully loaded, START sensor ON, short FF
22	-	Cassette identification FWD SEARCH before transition to FF (SP x7-speed)
24	26	FWD SEARCH (variable speed) including x2-speed
2C	2E	INSERT REC
40	43	REW
42	-	Cassette identification REV SEARCH before transition to REW (SP x7-speed)
44	47	REV SEARCH (variable speed)
4C	4C	AUDIO DUB
6C	6E	INSERT REC (VIDEO + AUDIO)
84	84	FWD STILL / SLOW
85	85	REV STILL / SLOW
8C	8F	REC PAUSE
8D	-	Back spacing
8E	-	Forward spacing (FWD transport mode with BEST function)
AC	AF	INSERT REC PAUSE
AD	-	INSERT REC back spacing
CC	CD	AUDIO DUB PAUSE
CD	-	AUDIO DUB back spacing
EC	EF	INSERT REC (VIDEO + AUDIO) PAUSE
ED	-	INSERT REC (VIDEO + AUDIO) back spacing

*2 : Mechanism operation mode

[Table of MN*]

Display	Mechanism operation mode
00	Command standby (No command to be executed)
01	Immediate Power OFF after EMG occurrence
02	Loading from an intermediate position during mechanism initialization
03	Unloading due to EMG occurrence during mechanism initialization
04	Ejecting cassette (ULSTOP to EJECT)
05	Inserting cassette (EJECT to ULSTOP)
06	Loading tape (ULSTOP to PLAY)
07	Unloading tape (PLAY to ULSTOP)
08	Transition from pinch roller ON to STOP
09	Transition from pinch roller OFF to STOP (PLAY to OFFSTOP)
0A	Transition from pinch roller OFF to STOP at power OFF
0B	Transition from pinch roller ON to STOP at power ON
0C	Transition to PLAY
0D	Transition to Search FF
0E	Transition to REC
0F	Transition to FWD STILL/SLOW
10	Transition to REV STILL/SLOW
11	Transition to Search REV
12	Transition from FF/REW to STOP
13	Transition to FF
14	Transition to REW
15	Tape end detection processing during loading
16	Short FWD/REV at tape sensor ON during unloading
17	Transition to FF/REW brake mode

[Table of HD*]

Display	Mechanism operation mode
00	STOP with pinch roller pressure off
01	STOP with pinch roller pressure on
02	U/L STOP (or tape being loaded)
04	PLAY (Normal playback)
05	PLAY (x1-speed playback using JOG)
0E	REC
11	Cassette ejected
22	FF
26	FWD SEARCH (variable speed) including x2-speed
2E	INSERT REC
43	REW
47	REV SEARCH
4C	AUDIO DUB
6E	INSERT REC (VIDEO + AUDIO)
84	FWD STILL/SLOW
85	REV STILL/SLOW
8F	REC PAUSE
AF	INSERT REC PAUSE
C7	REV SEARCH (x1-speed reverse playback using JOG)
CD	AUDIO DUB PAUSE
EF	INSERT REC (VIDEO + AUDIO) PAUSE
F0	Mechanism being initialized
F1	POWER OFF as a result of EMG
F2	Cassette being inserted
F3	Cassette being ejected
F4	Transition from STOP with pinch roller pressure on to STOP with pinch roller pressure off
F5	Transition from STOP with pinch roller pressure on to PLAY
F6	Transition from STOP with pinch roller pressure on to REC
F7	Cassette type detection SEARCH before FF/REW is being executed
F8	Tape being unloaded
F9	Transition from STOP with pinch roller pressure off to STOP with pinch roller pressure on
FA	Transition from STOP with pinch roller pressure off to FF/REW
FB	Transition from STOP with pinch roller pressure off to REC.P (T.REC,etc.)
FC	Transition from STOP with pinch roller pressure off to cassette type detection SEARCH
FD	Short REV being executed after END sensor on during unloading
FE	Tension loosening being executed after tape loading (STOP with pinch roller pressure on)
FF	Tape being unloaded

3- : Mechanism sensor information

[Common table of MN* and HD*]

Display	Mechanism sensor information			
	REC safety SW	Start sensor	End sensor	Mechanism position sensor
0-	Tab broken	ON	ON	ON
1-	Tab broken	ON	ON	OFF
2-	Tab broken	ON	OFF	ON
3-	Tab broken	ON	OFF	OFF
4-	Tab present	OFF	ON	ON
5-	Tab present	OFF	ON	OFF
6-	Tab present	OFF	OFF	ON
7-	Tab present	OFF	OFF	OFF
8-	Tab broken	ON	ON	ON
9-	Tab broken	ON	ON	OFF
A-	Tab broken	ON	OFF	ON
B-	Tab broken	ON	OFF	OFF
C-	Tab present	OFF	ON	ON
D-	Tab present	OFF	ON	OFF
E-	Tab present	OFF	OFF	ON
F-	Tab present	OFF	OFF	OFF

Tab broken = 0

Tab present = 1

Sensor ON = 0

Sensor OFF = 1

Sensor ON = 0

Sensor OFF = 1

-4 : Mechanism mode position

[Common table of MN* and HD*]

Mechanism sensor information	Display	Deck operation mode	
Even number (0, 2, 4, 6, 8, A, C, E)	-0	Not established	
	-1	EJECT	EJECT position
	-2	EJECT-EJECT1	Intermodal position
	-3	EJECT1	EJECT1 position
	-4	EJECT1-EJECT2	Intermodal position
	-5	EJECT2	EJECT2 position
	-6	EJECT2-ULSTOP	Intermodal position
	-7	ULSTOP	ULSTOP position
	-8	ULSTOP-UPPER	Intermodal position
	-9	UPPER	Loading (unloading) tape
	-A	UPPER-ONSTOP	Intermodal position
	-B	ONSTOP	PLAY position
	-C	PLAY-FWD/SS	Intermodal position
	-D	FWD/SS	FWD (FWD Still/Slow) position
	-E	FWD/SS-REV	Intermodal position
	-F	REV	REV (REV Still/Slow) position
Odd number (1, 3, 5, 7, 9, B, D, F)	-0	REV-OFFSTOP	Intermodal position
	-1	OFFSTOP	Pinch roller OFF position
	-2	OFFSTOP-FFREWB	Intermodal position
	-3	FFREWB	FF/REW Brake position
	-4	FFREWB-FFREW	Intermodal position
	-5	FFREW	FF/REW position

1.3.6 EMG detail information <2>

The type of the cassette tape and the cassette tape winding position can be confirmed based on the figure in EMG detail information <2> .

[FDPI/OSD display]

*5 : *6 : *7

*5 : Type of the cassette tape in use <1>

*6 : Winding position of the cassette tape in use

*7 : Type of the cassette tape in use <2> (Winding area)

Note:

- **EMG detail information <2> is the reference information stored using the remaining tape detection function of the cassette tape. As a result, it may not identify cassette correctly when a special cassette tape is used or when the tape has variable thickness.**

*5 : Cassette tape type <1>

Display	Cassette tape type <1>
00	Cassette type not identified
16	Large reel/small reel (T-0 to T-15/T-130 to T-210) not classified
82	Small reel, thick tape (T-120) identified/thin tape (T-140) identified
84	Large reel (T-0 to T-60) identified
92	Small reel, thick tape (T-130) identified/thin tape (T-160 to T-210) identified
93	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) not classified
C3	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) being classified
D3	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) being classified
E1	C cassette, thick tape (TC-10 to TC-20) identified
E2	Small reel, thick tape (T-0 to T-100) identified
E9	C cassette, thin tape (TC-30 to TC-40) identified
F1	C cassette, thick tape/thin tape (TC-10 to TC-40) not classified

Notes:

- **Cassette tape type <1> is identified a few times during mode transition and the identification count is variable depending on the cassette tape type. If an EMG occurs in the middle of identification, the cassette tape type may not be able to be identified.**
- **If other value than those listed in the above table is displayed, the cassette tape type is not identified.**

*6 : Cassette tape winding position

The cassette tape winding position at the moment of EMG is displayed by dividing the entire tape (from the beginning to the end) in 21 sections using a hex number from "00" to "14".

"00" : End of winding

"14" : Beginning of winding

"FF" : Tape position not identified

*7 : Cassette tape type <2> (Winding area)

Display	Cassette tape type <2>	(Reference) Word data (Beginning) (End)
00	Cassette type not identified	
04 - 08	C cassette, thick tape TC-10	(0497 - 0506) (0732 - 0858)
05 - 06	Small reel, thick tape T-20	(05A9 - 0661)
05 - 0C	C cassette, thick tape TC-20P	(0599 - 05FF) (0AA1 - 0C07)
06 - 0C	C cassette, thin tape TC-40	(0623 - 063D) (0C41 - 0CC3)
06 - 0C	C cassette, thin tape TC-30	(0611 - 0638) (0C0C - 0CB2)
07 - 08	Small reel, thick tape T-40	(07CC - 08E5)
09 - 0B	Small reel, thick tape T-60	(09FD - 0B78)
0C - 0D	Small reel, thick tape T-80(DF-160)	(0C20 - 0DFC)
0D - 0F	Small reel, thick tape T-90(DF-180)	(0D31 - 0F3E)
0E - 10	Small reel, thick tape T-100	(0E43 - 107F)
10 - 12	Small reel, thin tape T-140	(10E1 - 120C)
10 - 13	Small reel, thick tape T-120(DF-240)	(1073 - 1313)
11 - 14	Small reel, thick tape T-130	(1185 - 1429)
12 - 14	Small reel, thin tape T-160	(12D3 - 141F)
13 - 14	Small reel, thin tape T-210(DF-420)	(1373 - 14C3)
13 - 14	Small reel, thin tape T-180(DF-360)	(1357 - 14C0)
13 - 14	Small reel, thin tape T-168	(1395 - 14EE)
13 - 14	Small reel, thick tape DF-300	(13A8 - 14CE)
15 - 16	Large reel T-20	(1536 - 1618)
16 - 17	Large reel T-30	(1647 - 175A)
17 - 18	Large reel T-40	(1759 - 189C)
19 - 1B	Large reel T-60	(1989 - 1B2F)

Note:

- **The values of cassette tape type <2> in the above table are typical values with representative cassette tapes.**

1.3.7 EMG detail information <3>

Three deck operation modes preceding the deck operation mode in which the EMG occurs may be confirmed based on the figures in the EMG information detail <3>. For the contents of the displayed information, see the table "Deck operation mode" in section "1.3.5 EMG detail information <1>".

1.4 Service position

This unit has been designed so that the Mechanism and Main board assemblies can be removed together from the chassis assembly. Before diagnosing or servicing the circuit boards, take out the major parts from the chassis assembly.

1.4.1 How to set the "Service position"

- (1) Refer to the disassembly procedure and perform the disassembly of the major parts before removing the Mechanism assembly.
- (2) Remove the screws that fix the Mechanism assembly to the Chassis assembly. If any other screws are used to fix the boards, remove them also.
- (3) Remove the combined Mechanism and Main board assemblies.
- (4) If any other major parts are used, remove them also.
- (5) Connect the wires and connectors of the major parts that have been removed in steps (1) to (4). (Refer to Fig. 1-2-2d.)
- (6) Place the combined Mechanism, Main board and other board assemblies upside down.
- (7) Insert the power cord plug into the power outlet and then proceed with the diagnostics and servicing of the board assembly.

Notes:

- **Before inserting the power cord plug into the power outlet, make sure that none of the electrical parts are able to short-circuit between the workbench and the board assembly.**
- **For the disassembly procedure of the major parts and details of the precautions to be taken, see "1.2 Removing the major parts".**
- **If there are wire connections from the Main board and Mechanism assemblies to the other major parts, be sure to remove them (including wires connected to the major parts) first before performing step (2).**
- **When carrying out diagnosis and repair of the Main board assembly in the "Service position", be sure to ground both the Main board and Mechanism assemblies. If they are improperly grounded, there may be noise on the playback picture or FDP counter display may move even when the mechanism is kept in an inoperative status.**
- **In order to diagnose the playback or recording of the cassette tape, set the Mechanism assembly to the required mode before placing it upside down. If the mechanism mode is changed (including ejection) while it is in an upside down position the tape inside may be damaged.**
- **For some models, the mechanism and board assemblies are attached by connectors only. When carrying out a diagnosis or repair of the boards in the "Service position", make sure that the connectors are not disconnected.**

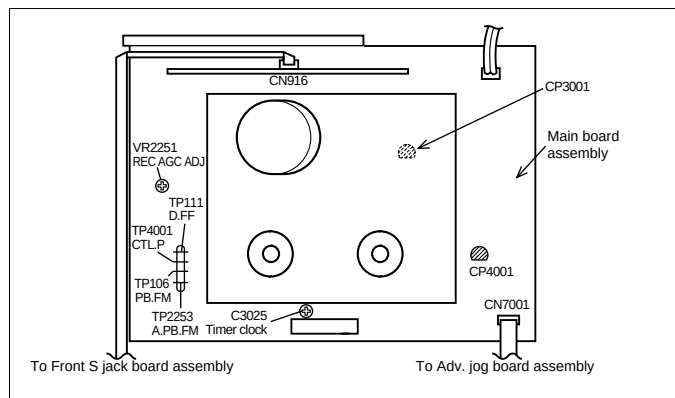


Fig. 1-4-1a

1.5 Jig RCU mode

This unit uses the following two modes for receiving remote control codes.

- 1) User RCU mode : Ordinary mode for use by the user.
- 2) Jig RCU mode : Mode for use in production and servicing.

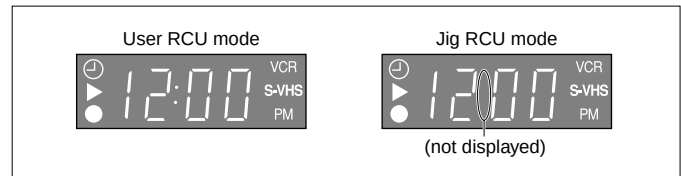


Fig. 1-5-1a

When using the Jig RCU, it is required to set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received). As both of the above two modes are stored in the EEPROM, it is required to set the VCR back to the User RCU mode each time that an adjustment is made or to check that the necessary operations have been completed. These modes can be set by the operations described below.

Note:

- **Confirm the RCU mode when exchanged parts. Since some SERVICE PARTS sets the VCR to the Jig RCU mode as initial setting.**

1.5.1 Setting the Jig RCU mode

- (1) Unplug the power cord plug from the power outlet.
- (2) Press and hold the "REC" and "PAUSE" buttons on the VCR simultaneously, while plugging the power cord plug into the power outlet.
When the VCR is set to the Jig RCU mode, the symbols (":") in the time display of the FDP are turned off.

1.5.2 Setting the User RCU mode

- (1) Turn off the power.
- (2) Press the "REC" and "PAUSE" buttons of the VCR simultaneously. Alternatively, transmit the code "80" from the Jig RCU.

1.6 Mechanism service mode

This model has a unique function to enter the mechanism into every operation mode without loading of any cassette tape. This function is called the "Mechanism service mode".

1.6.1 How to set the "Mechanism service mode"

- (1) Set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received).
- (2) Transmit the code "E5" from the Jig RCU.
- (3) Release the lug of the Cassette holder and then slide the Cassette holder toward the direction where the Cassette holder is loaded by manually.
- (4) The cassette holder lowers and, when the loading has completed, the mechanism enters the desired mode.
When the VCR is set to the Mechanism service mode, the symbols ("Timer") in the FDP (LED) are blinked.

1.6.2 How to exit from the "Mechanism service mode"

- (1) Unplug the power cord plug from the power outlet.

1.7 Maintenance and inspection

1.7.1 Cleaning

Regular cleaning of the transport system parts is desirable but practically impossible. So make it a rule to carry out cleaning of the tape transport system whenever the machine is serviced.

When the video head, tape guide and/or brush get soiled, the playback picture may appear inferior or at worst disappear, resulting in possible tape damage.

Note:

- **Absolutely avoid sweeping the upper drum vertically as this will cause damage to the video head.**

- (1) When cleaning the upper drum (especially the video head), soak a piece of closely woven cloth with alcohol and while holding the cloth onto the upper drum by the fingers, turn the upper drum counterclockwise.
- (2) To clean the parts of the tape transport system other than the upper drum, use a piece of closely woven cloth or a cotton swab soaked with alcohol.
- (3) After cleaning, make sure that the cleaned parts are completely dry before using the cassette tape.

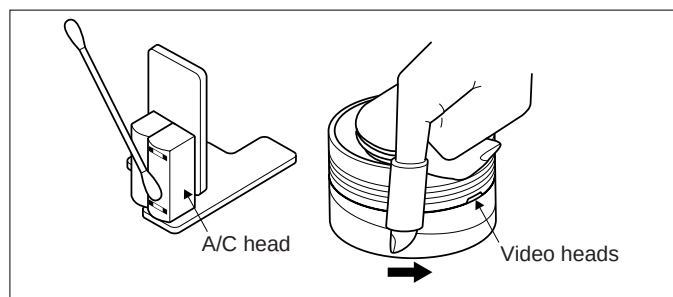


Fig. 1-7-1a

1.7.2 Lubrication

With no need for periodical lubrication, you have only to lubricate new parts after replacement. If any oil or grease on contact parts is soiled, wipe it off and newly lubricate the parts.

Note:

- **See the "mechanism assembly" diagram of the "parts list" for the lubricating or greasing spots, and for the types of oil or grease to be used.**

1.7.3 Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning, lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions. However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary. Also note that rubber parts may deform in time, even if the set is not used.

System	Parts name	Operation hours	
		1000H	2000H
Tape transport	Drum assembly	C,X	X
	A/C head	C,X	C,X
	Pinch roller arm assembly	C	C
	Full erase head	C	C
	Tension arm assembly	C	C
	Capstan motor (Shaft)	C	C
	Guide arm assembly	C	C
Drive	Capstan motor		X
	Capstan brake assembly		X
	Main brake assembly		X
	Belt (Capstan)	X	X
	Loading motor		X
	Clutch unit		X
	Worm gear		X
	Control plate		X
Other	Rotary encoder		X

C : Cleaning

X : Inspection or Replacement if necessary

1.8 Servicing items related to video navigation

The video navigation function built into this unit works by storing the video navigation data in the internal EEPROM and writing data in the cassette tape simultaneously.

The video navigation data stored in the EEPROM cannot be copied to another EEPROM. Therefore, when the circuit board mounting the EEPROM is replaced, the original EEPROM should be mounted on the new board. This will make the user's video navigation data usable with the new circuit board after replacement. However, the user's data cannot be restored if the EEPROM on the original circuit board is damaged.

Note:

- **If the circuit board mounting the EEPROM or the EEPROM alone has been replaced, it is required to perform confirmation/re-adjustment on all of the adjustment items using the EVR as well as those which are adjusted by transmitting adjustment codes from the Jig RCU.**

SECTION 3 ADJUSTMENT

3.1 Before adjustment

3.1.1 Precaution

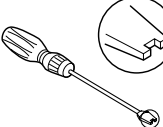
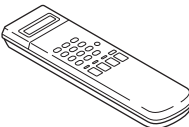
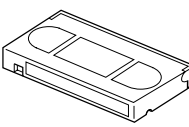
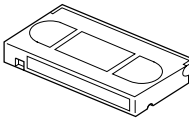
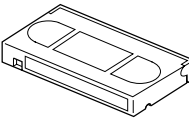
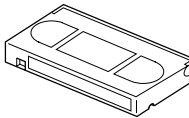
- **The adjustments of this unit include the mechanism compatibility and electrical adjustments. During the performance of this work, be sure to observe the precautions for each type of adjustment.**
- **If there is a reference to a signal input method in the signal column of the adjustment chart, "Ext. S-input" means the Y/C separated video signal and "Ext. input" means the composite video signal input.**
- **Unless otherwise specified, all measuring points and adjustment parts are located on the Main board.**

3.1.2 Required test equipments

- Color (colour) television or monitor
- Oscilloscope: wide-band, dual-trace, triggered delayed sweep
- Signal generator: RF / IF sweep / marker
- Signal generator: stairstep, color (colour) bar [NTSC]
- Recording tape
- Digit-key remote controller(provided)

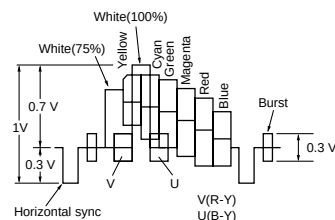
3.1.3 Required adjustment tools

	Machanism compatibility adjustment	Electrical adjustment
Roller driver	○	—
Jig RCU	—	○
Back tension cassette gauge	○	—
Alignment tape(MHPE)	○	○
Alignment tape(MHPE-L)	○	○
Alignment tape(MHP-L)	—	○

Roller driver PTU94002	Jig RCU PTU94023B	Back tension cassette gauge PUJ48076-2
		
Alignment tape (SP, stairstep, PAL) MHPE	Alignment tape (LP, stairstep, PAL) MHPE-L	Alignment tape (EP, stairstep, NTSC) MHP-L
		

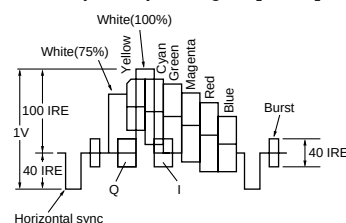
3.1.4 Color (colour) bar signal, color (colour) bar pattern

- Color(colour) bar signal [PAL]
- Color(colour) bar pattern [PAL]



White (75%)	Yellow	Cyan	Green	Magenta	Red	Blue
V	U	White 100%				Black

- Color(colour) bar signal [NTSC]
- Color(colour) bar pattern [NTSC]



White (75%)	Yellow	Cyan	Green	Magenta	Red	Blue
Q	White 100%	I				Black

3.1.5 Switch settings

When adjusting this unit, set the VCR mode and switches as described below.

- When using the Jig RCU, it is required to set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received). (See "section 1 disassembly".)

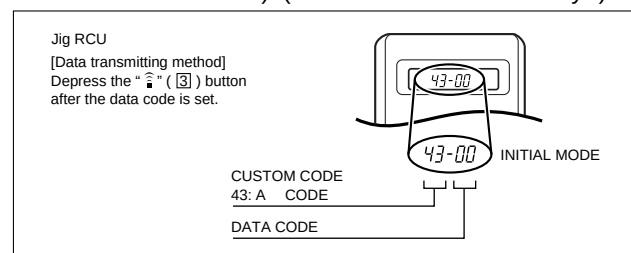


Fig. 3-1-5a Jig RCU [PTU94023B]

- Set the switches as shown below unless otherwise specified on the relevant adjustment chart. The switches that are not listed below can be set as desired. If the VCR is not equipped with the functions detailed below, setup is not required.

AUTO PICTURE/VIDEO CALIBRATION/ B.E.S.T./D.S.P.C.	OFF
PICTURE CONTROL/SMART PICTURE	NORMAL/NATURAL
VIDEO STABILIZER	OFF
TBC	ON
Digital 3R	ON
VIDEO NAVIGATION/TAPE MANAGER	OFF
BLUE BACK	OFF

3.1.6 Manual tracking mode (Auto tracking ON/OFF) setting

- (1) In order to set to the manual tracking mode during tape playback, press the "SP/EP(LP)" button on the remote control unit.
 - Each press of the button switches the auto tracking ON or OFF.
 - When the auto tracking is OFF, the monitor screen displays "AT: OFF".
 - When the manual tracking mode is set, the tracking is placed at the center position.
- (2) Press "channel +/-" to adjust the tracking manually.

3.1.7 EVR adjustment

Some of the adjustments require the adjustment performed by the EVR system. The main unit have EEPROMs for storing the EVR adjustment data and user setups.

Notes:

- ***In the EVR adjustment mode, the value is varied with the channel buttons (+, -). The adjusted data is stored when the setting mode changes (from PB to STOP, when the tape speed is changed, etc.). Take care to identify the current mode of each adjustment item when making an adjustment.***

- ***When changing the address setting in the EVR adjustment mode, use the Jig RCU or the remote controller having numeric keypad with which a numeric code can be directly input.***

The remote control code of the Jig RCU corresponds to each of the digit keys on the remote controller as follows.

Digit-key	0	1	2	3	4	5	6	7	8	9
Code	20	21	22	23	24	25	26	27	28	29

- ***As the counter indication and remaining tape indication are not displayed FDP during the EVR adjustment mode, check them on the TV monitor screen.***
- ***When performing the EVR adjustment, confirm that the FDP indication is changed to the EVR mode, as shown below.***

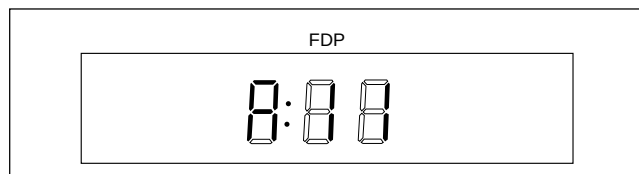


Fig. 3-1-7a EVR mode

3.2 Mechanism compatibility adjustment

Notes:

- ***Although compatibility adjustment is very important, it is not necessary to perform this as part of the normal servicing work. It will be required when you have replaced the A/C head, drum assembly or any part of the tape transport system.***
- ***To prevent damaging the alignment tape in the compatibility adjustment, prepare a cassette tape (for self-recording/play-back), perform a test on it by transporting it and making sure that the tape is not bent by the tape transport mechanisms such as in the guide rollers.(See Fig.3-2-2a.)***

3.2.1 Tension pole position

Notes:

- ***This adjustment must be performed every time the tension band is replaced.***

Signal	(A)	• Back tension cassette gauge [PUJ48076-2]
Mode	(B1) (B2)	• PB • Eject end
Adjustment part	(F)	• Adjust pin [Mechanism assembly]
Specified value	(G)	• 25 - 51 gf•cm (2.45 - 5 × 10 ⁻³ Nm)

- (1) Play back the back tension cassette gauge (A).
- (2) Check that the indicated value on the left side gauge is within the specified value (G).
- (3) If the indicated value is not within the specified value (G), perform the adjustment in a following procedure.(See Fig.3-2-1a.)
 - 1) Remove the top frame, cassette holder and side frames (L/R) all together. (See "section 2 mechanism".)
 - 2) Rotate the loading motor gear to move the control plate so that the triangular stamping to the left of the "P" stamping is aligned with the stamping (a) on the main deck. This positioning is mode (B1).
 - 3) Adjust by turning the adjustment pin so that the tip of the tension arm is aligned with the stamping (b) on the main deck.
 - 4) Rotate the reel disk (S) by about one turn clockwise and make sure that the round hole of the adjustment pin is located in the "OK" range. If it is outside this range, restart the adjustment from the beginning.

After completion of the adjustment, rotate the loading gear motor to return it to the mode (B2) position.

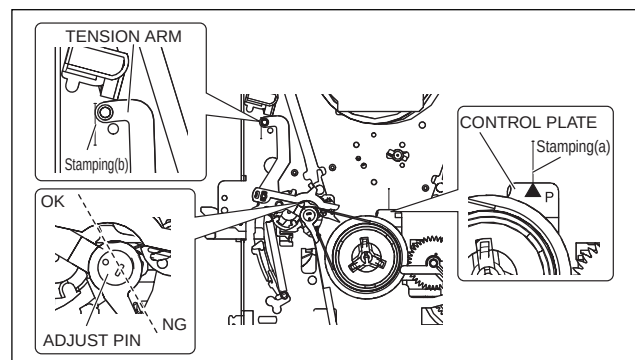


Fig. 3-2-1a

3.2.2 FM waveform linearity

Signal	(A1) (A2)	• Alignment tape(SP, staircase, PAL) [MHPE] • Alignment tape(LP, staircase, PAL) [MHPE-L]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• Guide roller [Mechanism assembly]
Specified value	(G)	• Flat V.PB FM waveform
Adjustment tool	(H)	• Roller driver [PTU94002]

- Play back the alignment tape (A1).
- Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
- Set the VCR to the manual tracking mode.
- Make sure that there is no significant level drop of the V.PB FM waveform caused by the tracking operation, with its generally parallel and linear variation ensured. Perform the following adjustments when required. (See Fig. 3-2-2b.)
- Reduce the V.PB FM waveform by the tracking operation. If a drop in level is found on the left side, turn the guide roller of the pole base assembly (supply side) with the roller driver to make the V.PB FM waveform linear. If a drop in level is on the right side, likewise turn the guide roller of the pole base assembly (take-up side) with the roller driver to make it linear. (See Fig. 3-2-2b.)
- Make sure that the V.PB FM waveform varies in parallel and linearly with the tracking operation again. When required, perform fine-adjustment of the guide roller of the pole base assembly (supply or take-up side).
- Unload the cassette tape once, play back the alignment tape (A1) again and confirm the V.PB FM waveform.
- After adjustment, confirm that the tape wrinkling does not occur at the roller upper or lower limits. (See Fig. 3-2-2a.)

[Perform adjustment step (9) only for the models equipped with SP mode and EP (or LP) mode.]

- Repeat steps (1) to (8) by using the alignment tape (A2).

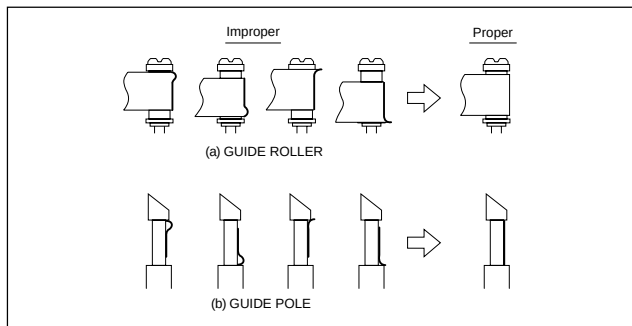


Fig. 3-2-2a

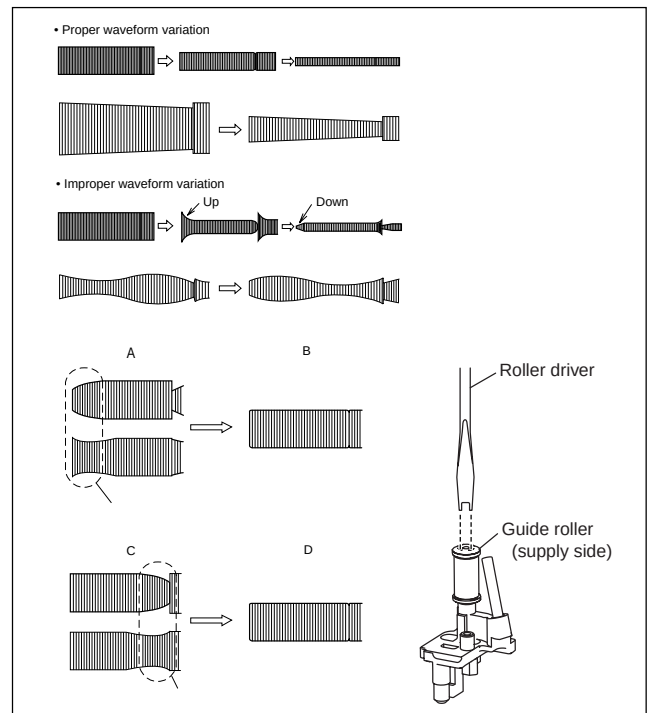


Fig. 3-2-2b

3.2.3 Height and tilt of the A/C head

Note:

- Set a temporary level of the height of the A/C head in advance to make the adjustment easier after the A/C head has been replaced. (See "section 2 mechanism".)

Signal	(A)	• Alignment tape(SP, staircase, PAL) [MHPE]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D1) (D2)	• AUDIO OUT terminal • TP4001 (CTL. P)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• A/C head [Mechanism assembly]
Specified value	(G)	• Maximum waveform

- Play back the alignment tape (A).
- Apply the external trigger signal to D.FF (E), to observe the AUDIO OUT waveform and Control pulse waveform at the measuring points (D1) and (D2) in the ALT mode.
- Set the VCR to the manual tracking mode.
- Adjust the AUDIO OUT waveform and Control pulse waveform by turning the screws (1), (2) and (3) little by little until both waveforms reach maximum. The screw (1) and (3) are for adjustment of tilt and the screw (2) for azimuth.

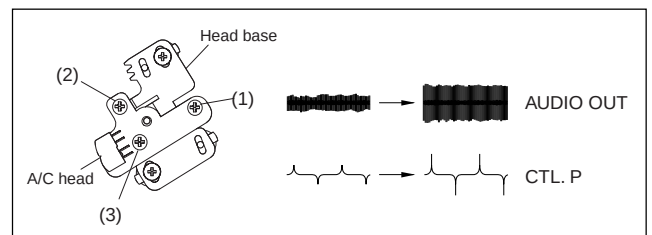


Fig. 3-2-3a

3.2.4 A/C head phase (X-value)

Signal	(A1) (A2)	• Alignment tape(SP, stairstep, PAL) [MHPE] • Alignment tape(LP, stairstep, PAL) [MHPE-L]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• A/C head base [Mechanism assembly]
Specified value	(G)	• Maximum V.PB FM waveform
Adjustment tool	(H)	• Roller driver [PTU94002]

- (1) Play back the alignment tape (A1).
- (2) Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
- (3) Set the VCR to the manual tracking mode.
- (4) Loosen the screws (4) and (5), then set the Roller driver to the innermost projected part of the A/C head. (See Fig. 3-2-4a.)
- (5) Rotate the roller driver so that the A/C head comes closest to the capstan. From there, move the A/C head back gradually toward the drum until the point where the FM waveform is maximized for the second time, and then tighten the screws (4) and (5) temporarily.
- (6) Play an alignment tape (A2) and set to the manual-tracking mode.
- (7) Fine-adjust A/C head base position to maximize the FM waveform, and then tighten the screws (4) and (5) firmly.
- (8) Play alignment tapes (A1) and (A2) and confirm that the FM waveforms are maximized when the tracking is at the center position.

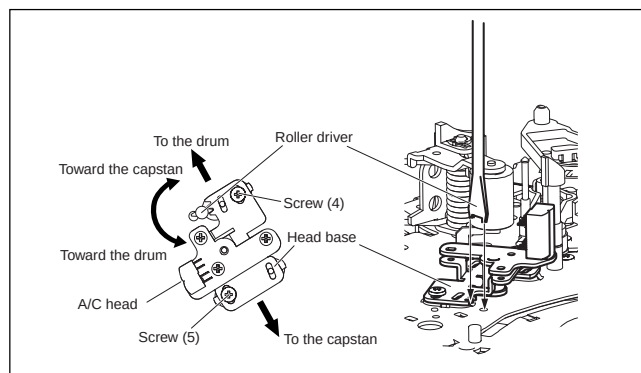


Fig. 3-2-4a

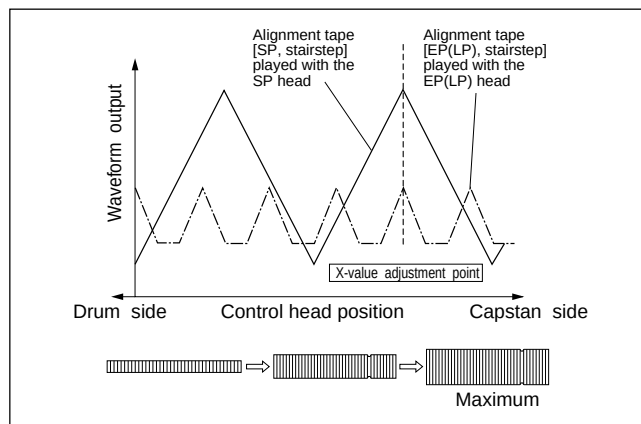


Fig. 3-2-4b

3.3 Electrical adjustment

Note:

The following adjustment procedures are not only necessary after replacement of consumable mechanical parts or board assemblies, but are also provided as references to be referred to when servicing the electrical circuitry.

In case of trouble with the electrical circuitry, always begin a service by identifying the defective points by using the measuring instruments as described in the following electrical adjustment procedures. After this, proceed to the repair, replacement and/or adjustment. If the required measuring instruments are not available in the field, do not change the adjustment parts (variable resistor, etc.) carelessly.

3.3.1 Servo circuit

3.3.1.1 Switching point

Signal	(A1) (A2) (A3)	• Stairstep signal • Alignment tape (LP, stairstep, PAL) [MHPE-L] • Alignment tape (EP, stairstep, NTSC) [MHP-L]
Mode	(B)	• PB • TBC:OFF
Equipment	(C)	• Oscilloscope
Measuring point	(D1) (D2)	• VIDEO OUT terminal (75Ω terminated) • TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• Jig RCU: Code "51" or "52"
Specified value	(G) (G)	• 7.5 ±0.5 H • 8.0 ±0.5 H (PAL) • 7.5 ±0.5 H (NTSC)
Adjustment tool	(H)	• Jig RCU [PTU94023B]

- (1) Play back the signal (A1) of the alignment tape (A2).
- (2) Apply the external trigger signal to D. FF (E) to observe the VIDEO OUT waveform and V. PB FM waveform at the measuring points (D1) and (D2).
- (3) Set the VCR to the manual tracking mode.
- (4) Adjust tracking so that the V. PB FM waveform becomes maximum.
- (5) Transmit the code (F) from the Jig RCU to adjust so that the trigger point of the VIDEO OUT waveform is changed from the trailing edge of the V. sync signal becomes the specified value (G1).
- (6) Set the VCR to the stop mode or eject mode.
- (7) Play back the signal (A1) of the alignment tape (A3).
- (8) Repeat steps (2) to (6).

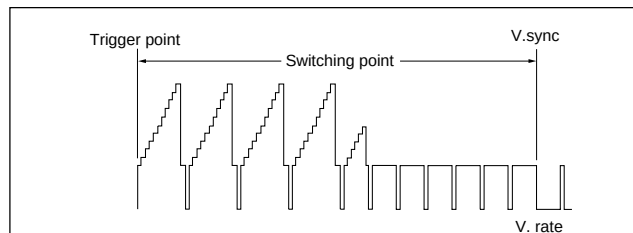


Fig. 3-3-1-1a Switching point

3.2.2 Slow tracking preset

Signal	(A1) (A2) (A3)	• Ext. input • Color (colour) bar signal [PAL] • Color (colour) bar signal [NTSC]
Mode (Notes)	(B1) (B2) (B3) (B4)	• VHS SP • VHS LP] (PAL) • VHS SP • VHS EP] (NTSC)
Measuring point	(D)	• TV-Monitor
Adjustment part	(F)	• Jig RCU: Code "71" or "72"
Specified value	(G)	• Minimum noise
Adjustment tool	(H)	• Jig RCU [PTU94023B]

- Record the signal (A2) in the mode (B1), and play back the recorded signal.
- Set the VCR to the manual tracking mode.
- Set the VCR to the FWD slow (+1/6x) mode.
- Transmit the code (F) from the Jig RCU to adjust so that the noise bar becomes the specified value (G) on the TV monitor in the slow mode.
- Set the VCR to the Stop mode.
- Confirm that the noise bar is (G) on the TV monitor in the slow mode.
- Repeat steps (3) to (6) in the REV slow (-1/6x) mode.
- Repeat steps (1) to (7) in the mode (B2).
- [For HR-S8960AG]
- Record the signal (A3) in the mode (B3), and play back the recorded signal.
- Repeat steps (2) to (7).
- Repeat steps (9) and (10) in the mode (B4)

Note:

- For FWD slow (+1/6x) playback, transmit the code "08" from the Jig RCU to enter the slow playback mode, and transmit the code "D0" for REV slow (-1/6x) mode.

3.3.2 Video circuit

3.3.2.1 EE Y/PB Y (S-VHS/VHS) level

Signal	(A1) (A2) (A3)	• Ext. S-input • Ext. input • Color (colour) bar signal [PAL]
Mode	(B1) (B2) (B3)	• EE SP • S-VHS SP • VHS SP
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• Y OUT terminal (75Ω terminated)
EVR mode EVR address	(F1) (F2) (F3) (F4)	• Jig code "57" • A : 11 • Jig code "21" twice • Jig code "18" or "19" (Channel +/-)
Specified value	(G)	• 1.00 ± 0.05 Vp-p
Adjustment tool	(H)	• Jig RCU [PTU94023B]

- Input the signal (A3) from the input point (A1).
- Set the VCR to the mode (B1).
- Observe the Y OUT waveform at the measuring point (D).
- Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
- Set the EVR address to (F2) by transmitting the code (F3) from the Jig RCU.
- Transmit the code (F4) from the Jig RCU to adjust so that the Y level of the Y OUT waveform becomes the specified value (G).

- Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)
- Input the signal (A3) from the input point (A2).
- Repeat steps (3) to (7) in the mode (B1).
- Record the signal (A3) in the mode (B2), and play back the recorded signal.
- Set the VCR to the manual tracking mode.
- Repeat steps (3) to (7) in the mode (B2).
- Record the signal (A3) in the mode (B3), and play back the recorded signal.
- Set the VCR to the manual tracking mode.
- Repeat steps (3) to (7) in the mode (B3).

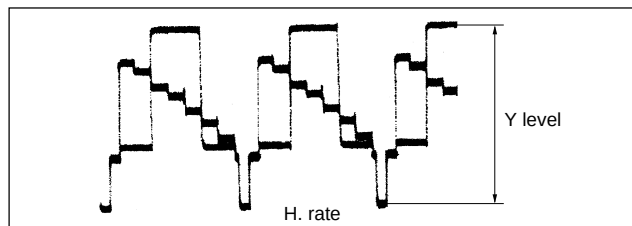


Fig. 3-3-2-1a EE/PB Y level

3.3.3 Audio circuit

Notes:

- GND (Ground) should be taken from the Tuner shield case.

3.3.3.1 Audio REC FM

Signal	(A1) (A2) (A3)	• Ext. input • Audio: No signal • Video: Color (colour) bar signal [PAL]
Mode	(B)	• S-VHS LP
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP2253 (A. PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• VR2251
Specified value	(G1) (G2)	• 600 ± 100 mVp-p • More than 400 mVp-p

- Apply the external trigger signal to D.FF (E) to observe the Audio PB FM waveform at the measuring point (D).
- Record the signal (A3) with no audio signal input in the mode (B), and play back the recorded signal.
- Set the VCR to the manual tracking mode.
- If the A.PB FM level is not within the specified value (G1), perform the adjustment in a following procedure.
- Adjust the Adjustment part (F) so that the A. PB FM level of the higher channel level becomes the specified value (G1). (Adjust before recording, then confirm it by playing back.)
- If the specified value (G1) is not obtained, adjust the Adjustment part (F) so that the waveform level of the lower channel level becomes the specified value (G2). (Adjust before recording, then confirm it by playing back.)

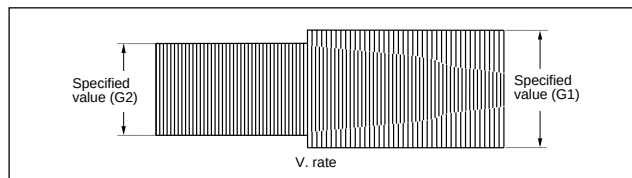


Fig. 3-3-3-1a Audio REC FM

3.3.4 Syscon circuit [HR-S8960EX, HR-S8960AG]

Note:

- ***When perform this adjustment, remove the Mechanism assembly.***

3.3.4.1 Timer clock

Signal	(A)	• No signal
Mode	(B)	• EE
Equipment	(C)	• Frequency counter
Measuring point	(D1)	• IC3001 pin 61
Short point	(D2)	• IC3001 pin 24
	(D3)	• C3026 + and –
Adjustment part	(F)	• C3025 (TIMER CLOCK)
Specified value	(G)	• 1024.008 ± 0.001 Hz (976.5549 ± 0.0010 μ sec)

- (1) Connect the frequency counter to the measuring point (D1).
- (2) Connect the short wire between the short point (D2) and Vcc (5V).
- (3) Short the leads of capacitor (D3) once in order to reset the microprocessor of the SYSCON.
- (4) Disconnect the short wire between the short point (D2) and Vcc then connect it again.
- (5) Adjust the Adjustment part (F) so that the output frequency becomes the specified value (G).



VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY. 12,3-chome,Moriya-cho,Kanagawa-ku,Yokohama,Kanagawa-prefecture,221-8528,Japan



Printed in Japan
0306 VP

SECTION 4 CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions

The Components identified by the symbol  are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

- 1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
Chip resistors are 1/16 W.
K: K Ω (1000 Ω), M: M Ω (1000K Ω)
- 2) All capacitance values are in μ F, (P: PF).
- 3) All inductance values are in μ H, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

Note: The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

2. Indications of control voltage

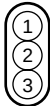
AUX : Active at high.

$\overline{\text{AUX}}$ or AUX(L) : Active at low.

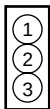
3. Interpreting Connector indications



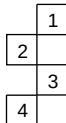
Removable connector



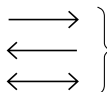
Wire soldered directly on board



Non-removable Board connector



Board to Board

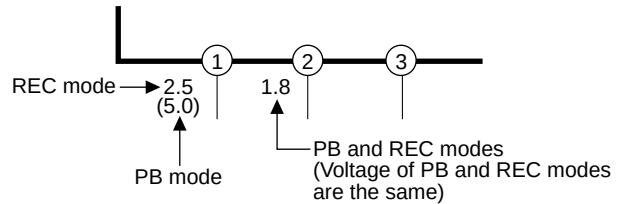


Connected pattern on board
The arrows indicate signal path

Note: For the destination of each signal and further line connections that are cut off from the diagram, refer to "BOARD INTERCONNECTIONS"

4. Voltage measurement

- 1) Regulator (DC/DC CONV) circuits
REC : Colour bar signal.
PB : Alignment tape (Colour bar).
— : Unmeasurable or unnecessary to measure.
- 4) Indication on schematic diagram
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.

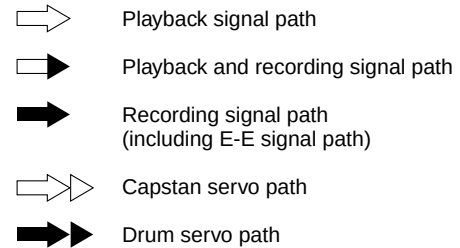


Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

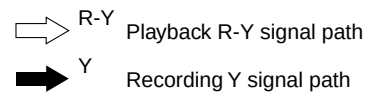
5. Signal path Symbols

The arrows indicate the signal path as follows.

NOTE : The arrow is DVC unique object.



(Example)



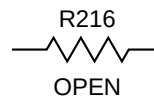
6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



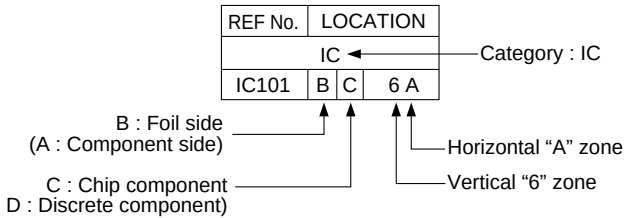
CIRCUIT BOARD NOTES

1. Foil and Component sides

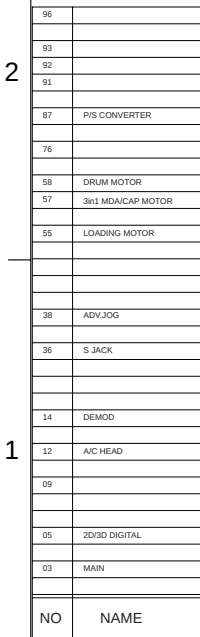
- 1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.
- 2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

Parts location are indicated by guide scale on the circuit board.



Note: For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).



A	B	C	D	4-3	4-4	E	F	G	H
---	---	---	---	-----	-----	---	---	---	---

4.2 MAIN(VIDEO/N.AUDIO) SCHEMATIC DIAGRAM

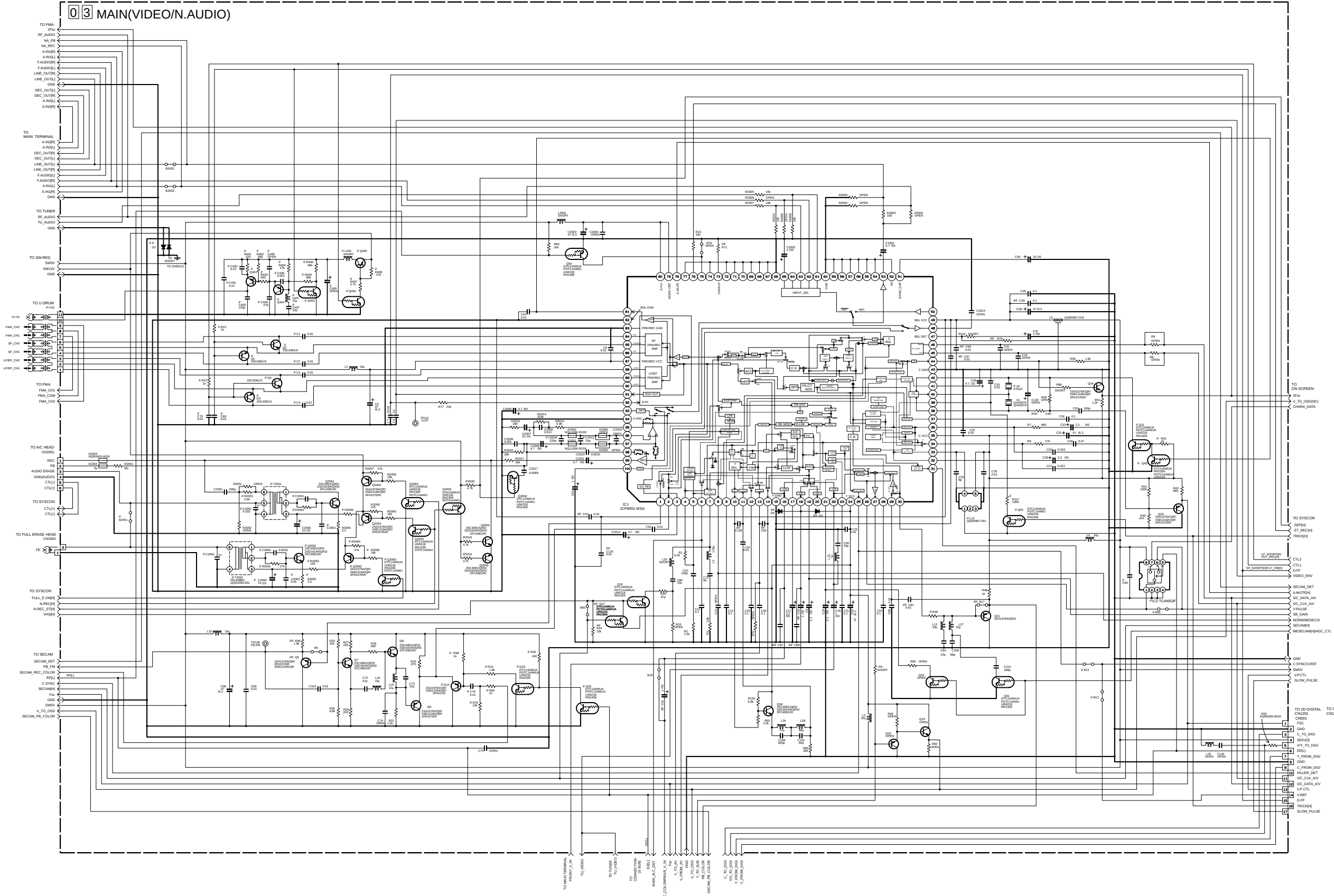
5

4

3

2

1



#DIFFERENCE TABLE

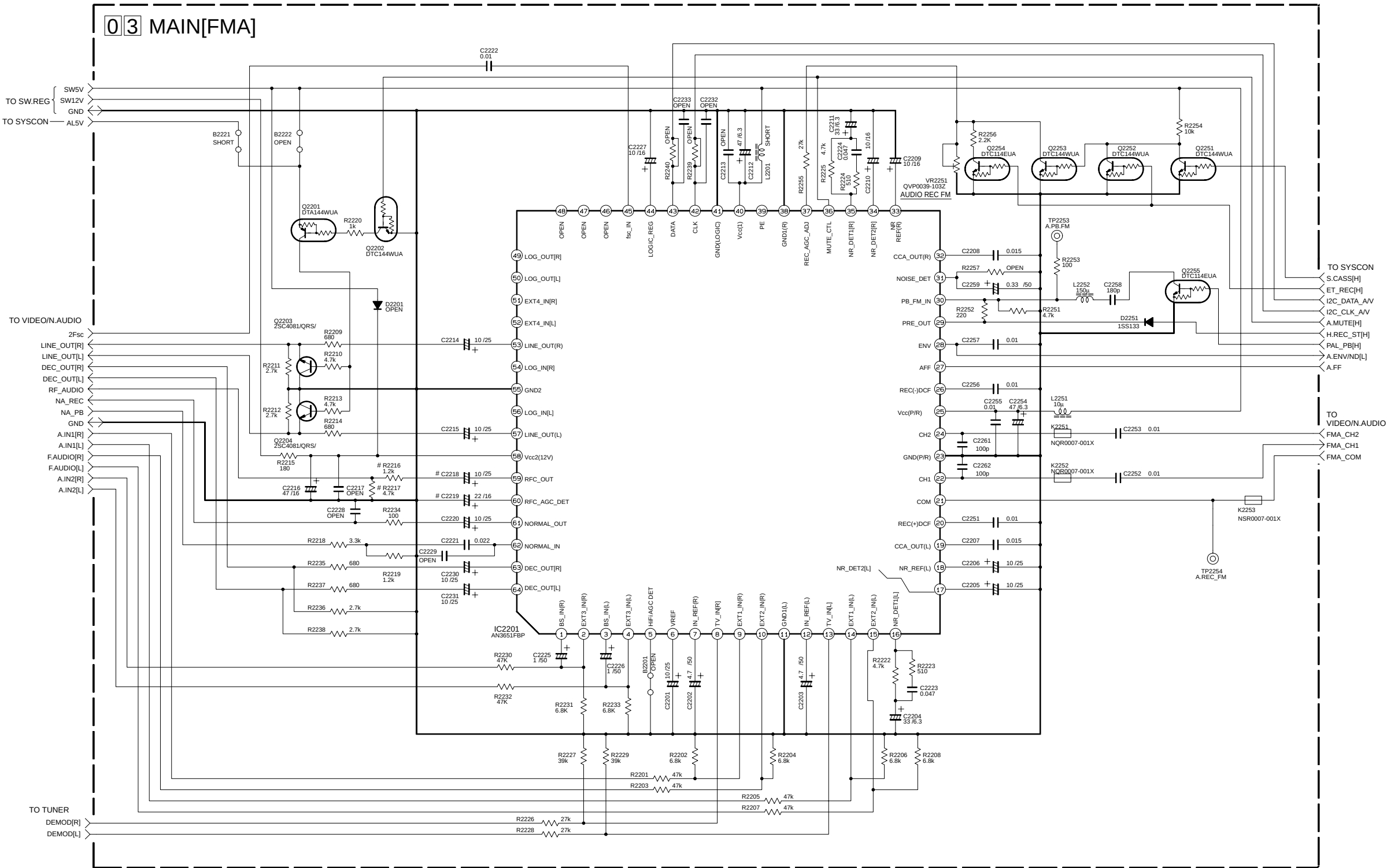
		H-SHORT		PRELIN	PAL EPT-TRICK		C TRAP		3D		for MS		AUDIO DUBBING										
	CN1	R401-R408 C401-C405 C406-C407 C408-C409	Q1-Q4 Q10-Q13 Q14-Q17 Q18-Q21	C1-C4 C10-C13 C14-C17 C18-C21	R41 R42 R43 R44	R11 R12 R13 R14	B1 B2 B3 B4	X1 X2 X3 X4	X2 D1/LF	"Q14-Q18 Q19" "Q20-Q21 R19/R20" "R56/R67 C7/C8"		Function	T2051	B2051	R2051	R2054	R2056	C2053	C2054	C2061	Q2061-Q2063 Q2064-Q2065 Q2066-Q2067 Q2068-Q2069		
SP LINEUP																							
S8900EX-S8900EX(S2)	1-11	O	X	O	0.1	X	O	470	X	O	X	O	X	O	PELND80	X	3.9k	15k	100	0.0033	0.01	0.033	O
S8900AG(S2)	1-11	O	X	O	0.1	X	O	470	X	O	X	O	X	O	PELND80	X	3.9k	15k	100	0.0033	0.01	0.033	O
S7900EX-S7900EX(S2)	1-9	X	O	0.01	X	O	470	X	O	X	O	X	O	X	PELND82	O	3.9k	12k	82	0.0047	0.022	0.082	X
S7900EF(S2)	1-9	X	O	0.01	X	O	470	X	O	O	O	O	O	X	PELND82	O	3.9k	12k	82	0.0047	0.022	0.082	X
S6900EX(S1)	1-9	X	O	0.01	O	X	220	O	X	X	X	X	X	X	PELND82	O	3.9k	12k	82	0.0047	0.022	0.082	X
S6900EF(S1)	1-9	X	O	0.01	O	X	220	O	X	X	X	X	X	X	PELND82	O	3.9k	12k	82	0.0047	0.022	0.082	X
S6900AG(S1)	1-9	X	O	0.01	X	X	220	O	X	X	X	X	X	X	PELND82	O	3.9k	12k	82	0.0047	0.022	0.082	X

MARKS ARE NOT MOUNTED ALL MODELS

USE REC	B65	B10
O: Used	X	O
X: Not used	O	X

NOTES (UNLESS OTHERWISE SPECIFIED):
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN P.F.
ELECTROLYTIC
CERAMIC
MYLAR
NON POLAR
ALL NPN TYPE TRANSISTORS ARE 2SC4081(QRS) or 2SD1819A(QRS) or 2PC4081(R)
ALL PNP TYPE TRANSISTORS ARE 2SA1576A(QR) or 2SB121BA(QR) or 2PA1576(R)
ALL NPN TYPE DIGITAL TRANSISTORS ARE DTCL4480A or UNCL316 or RA1309 or PNYCL4480A
ALL PNP TYPE DIGITAL TRANSISTORS ARE DTA14480A or UNCL316 or R20309 or PDA14480A

4.3 MAIN(FMA) SCHEMATIC DIAGRAM

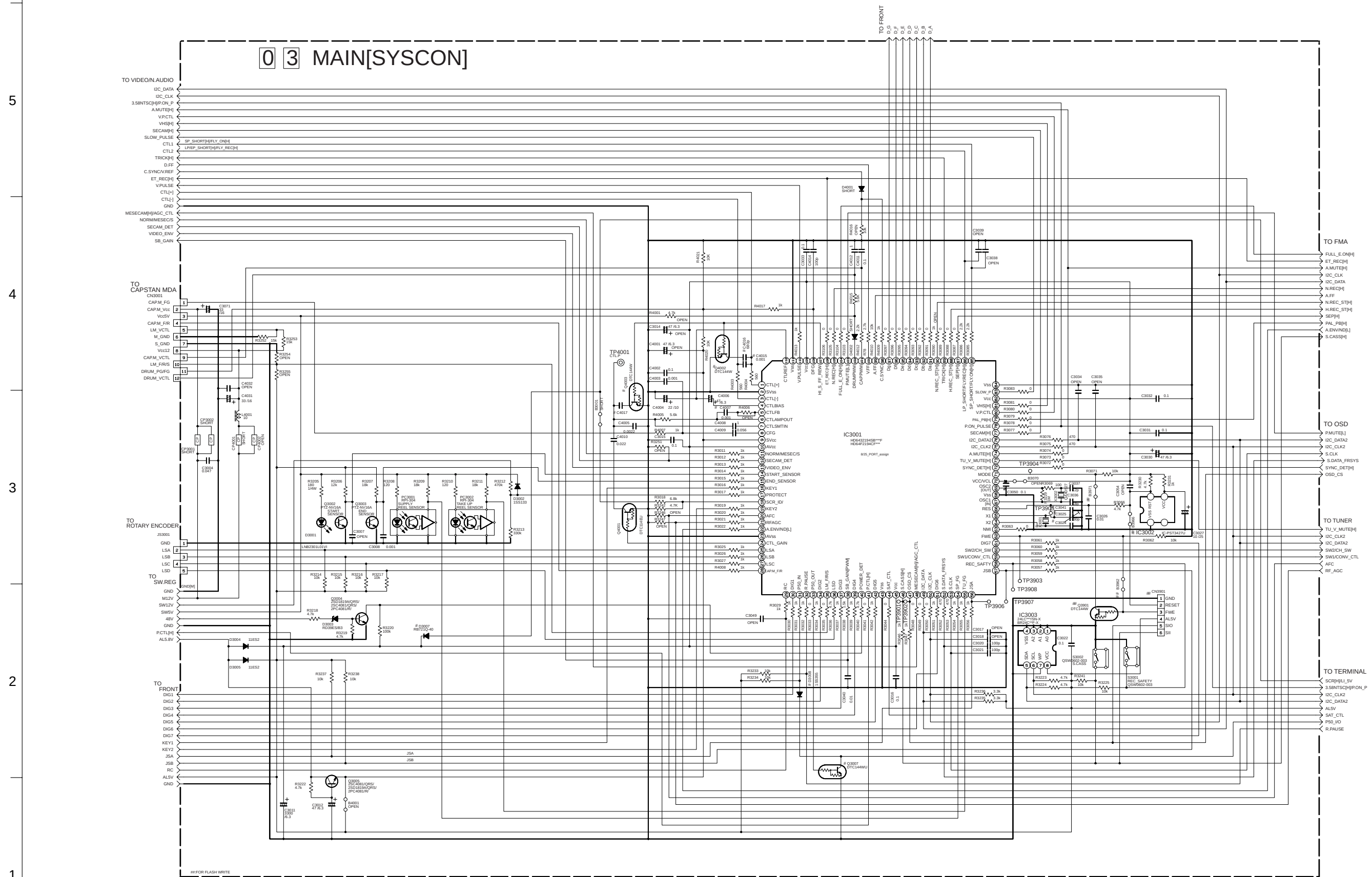


#DIFFERENCE TABLE			
		1	○ : Used X : Not used
RF OUT	C2218	C2219	R2216 R2217
YES			○
NO			X

NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.

⊕ — ELECTROLYTIC
— CERAMIC
— MYLER
— NON POLAR

4.4 MAIN(SYS CON) SCHEMATIC DIAGRAM



	R3032 R3233	R3012	R3080 R3083	R3104	D3007
S2SEVIEK	O	X	O	O	X
S2EVIEK	X	X	O	X	X
S1IEK	X	X	X	X	X
S1MF	X	O	X	X	X
S2EF	X	O	O	X	X
S2SAG	O	X	O	O	O
S1BA	X	X	X	X	O

NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.

	ELECTROLYTIC
	CERAMIC
	MYLAR
	NON POLAR

5



3

2

1

A

B

C

D

4-11

4-12

E

F

G

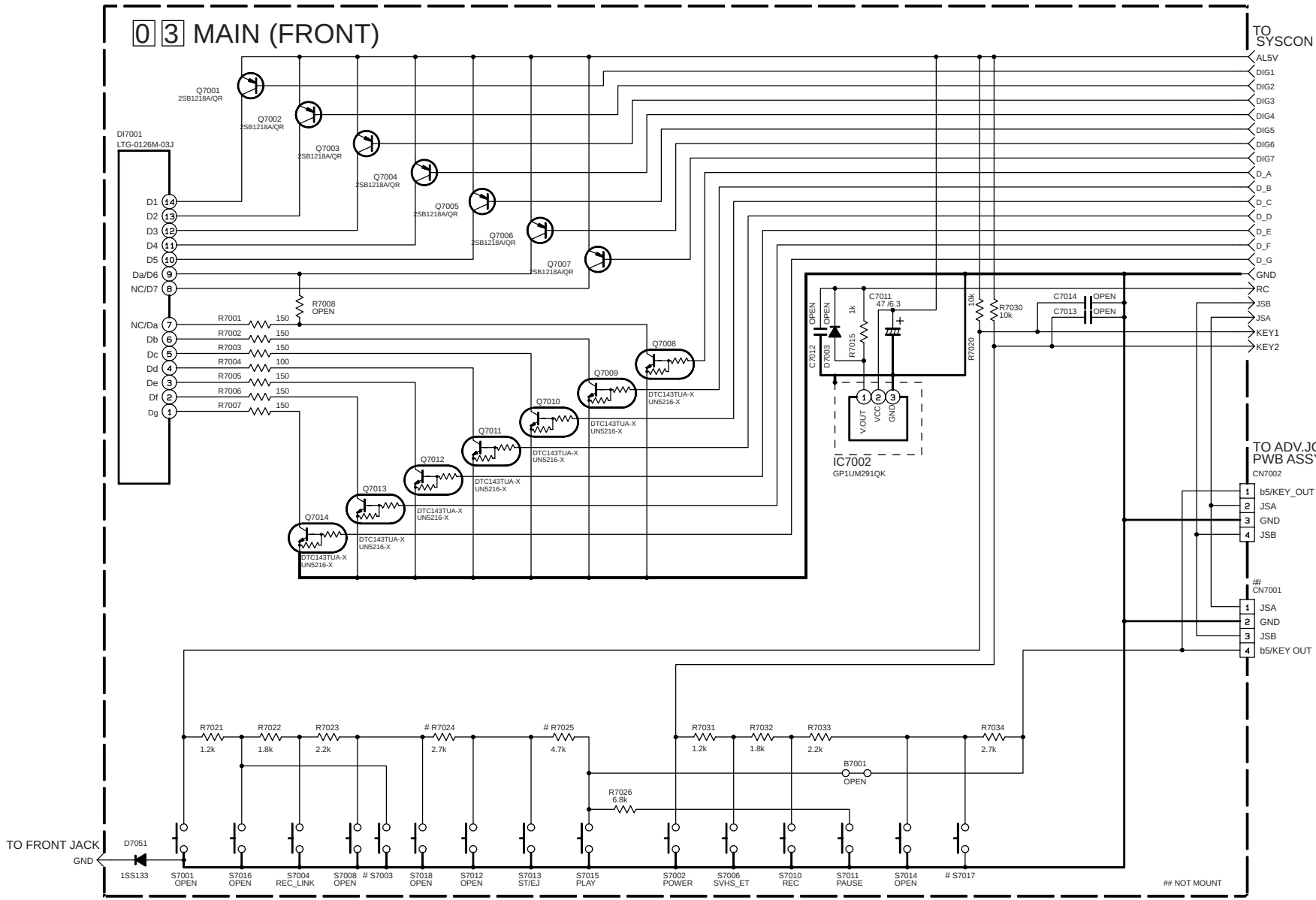
H

5

2

p10436001a_rev0

4.7 MAIN(FRONT) AND ADV.JOG SCHEMATIC DIAGRAMS

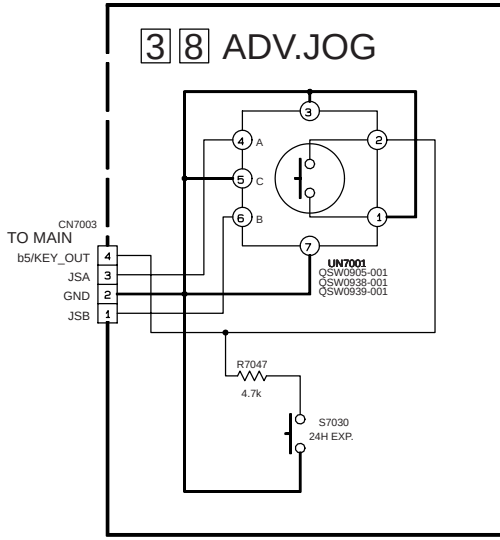


#DIFFERENCE TABLE 1

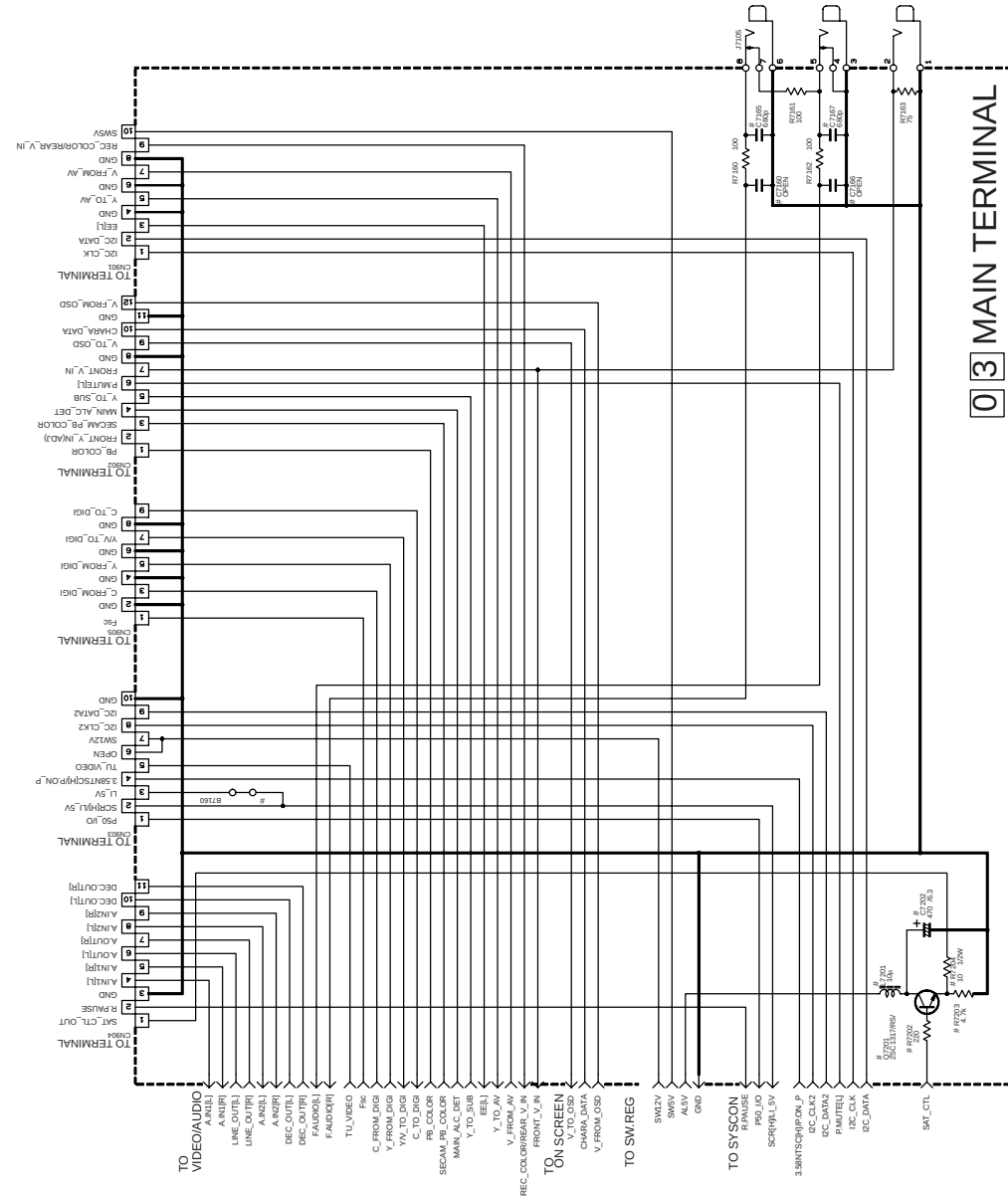
TOOL	Working No	S7001	S7002	S7003	S7004	S7006	S7008	S7010	S7011	S7012	S7013	S7014	S7015	S7016	S7017	S7018	S7030
400KA	S1/S2	-	POWER	TIMER	REC LINK	S-VHS ET	-	REC	PAUSE	-	ST/EJ	-	PLAY	-	SP/LP REP	-	24H EXP
	S25	-	POWER	INSERT	REC LINK	S-VHS ET	-	REC	PAUSE	-	ST/EJ	-	PLAY	-	A.DUB	-	24H EXP

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR



4.9 MAIN(MAIN TERM.) SCHEMATIC DIAGRAM



B7160	☐	☒
LITH BATT	YES	NO

C7160 C7165 C7166 C7167	☐	☒
CE	YES	NO

# DIFFERENCE TABLE		
Q7201		○
R7202		×
R7203		
R7204		
C7202		
L7201		
SAT CTL	YES	
	NO	

NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.

CAPACITANCE VALUES

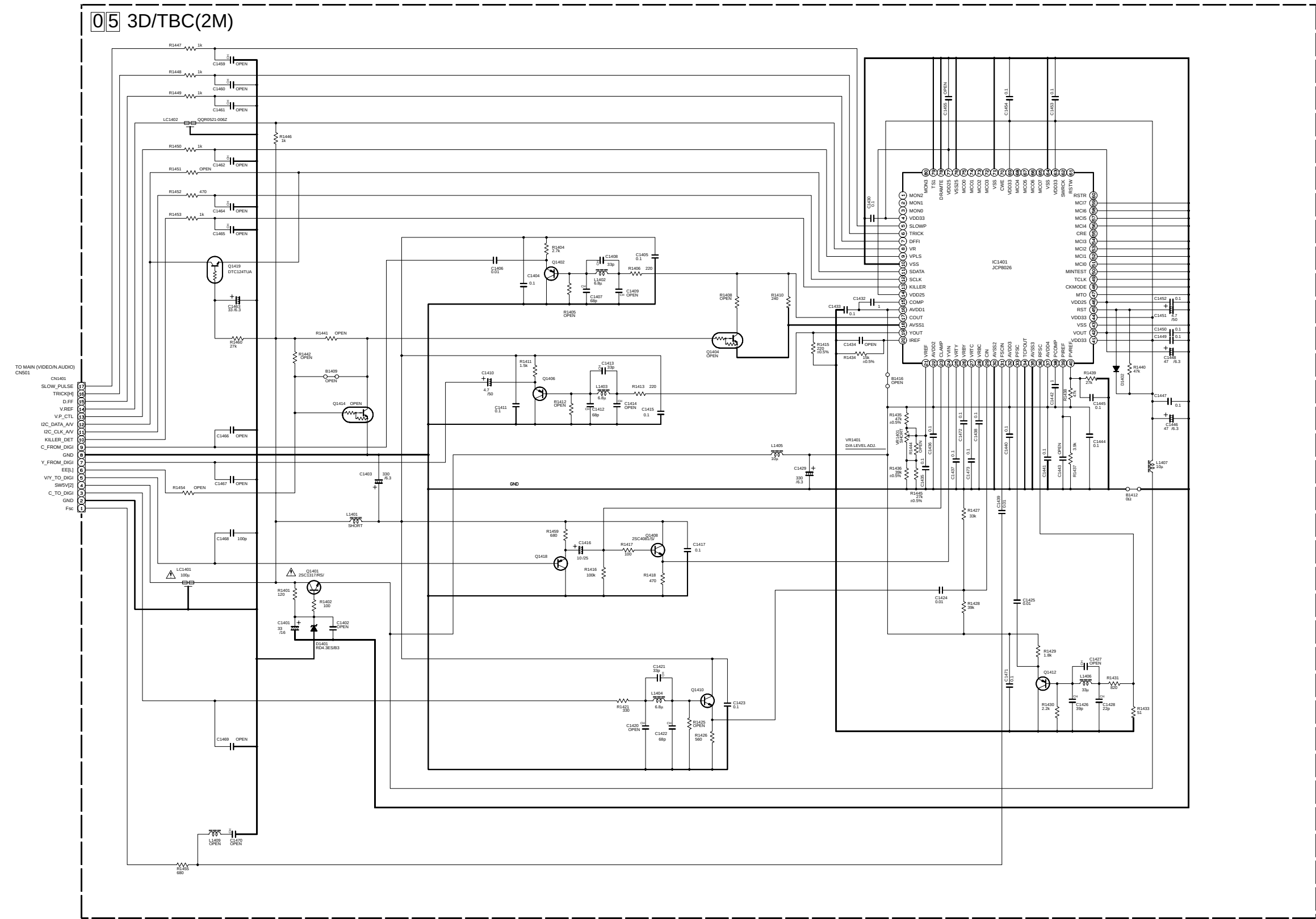
 ELECTROLYTIC

 CERAMIC

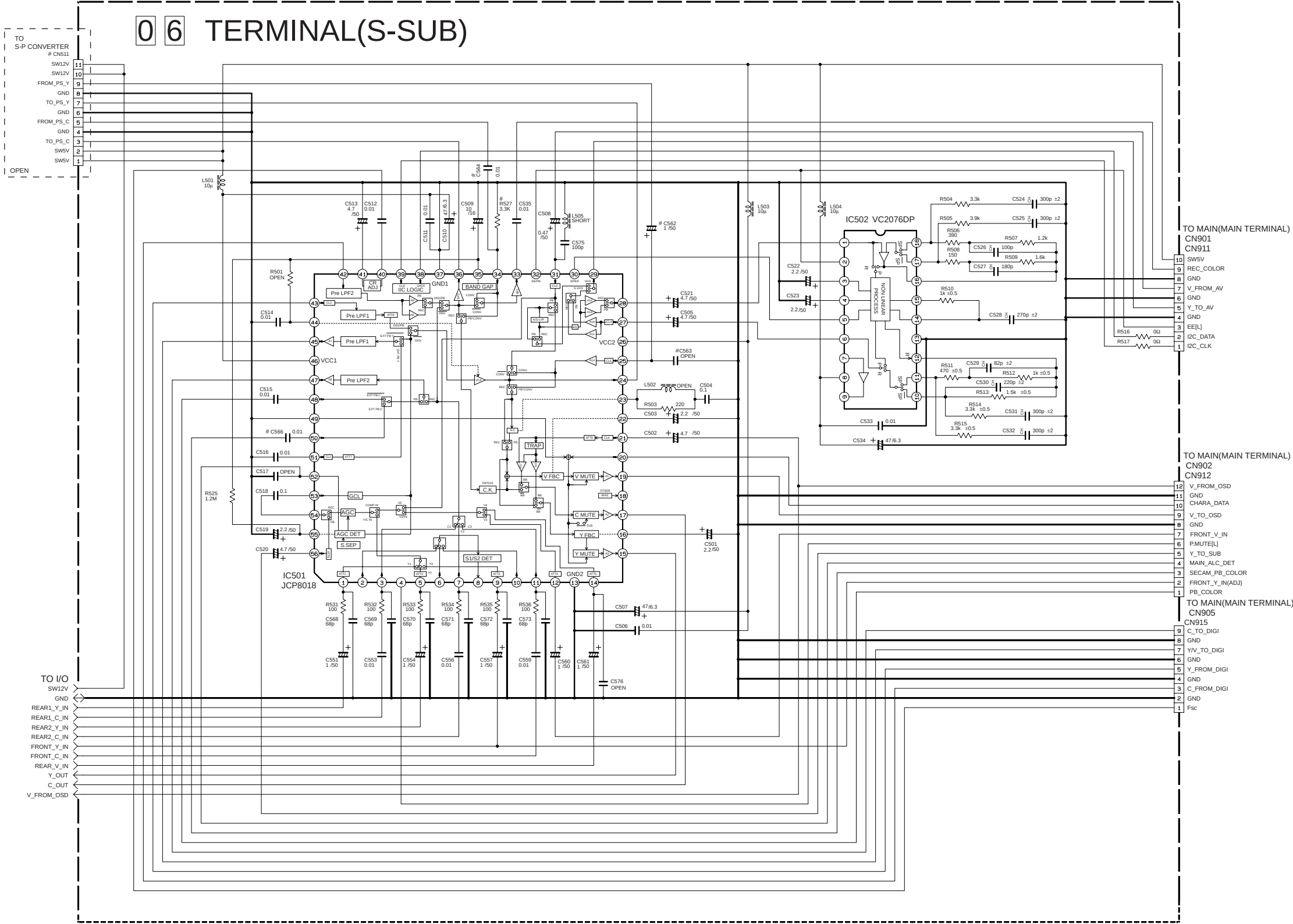
 MYLER

 NON POLAR

4.10 3D/TBC (2M) SCHEMATIC DIAGRAM



NOTES-UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR
ALL DIODES ARE 1SS133 OR 1N4148
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/Q/R/ OR 2PA1576R/
ALL NPN TYPE TRANSISTORS ARE 2SC4081/Q/R/S/ OR 2PC4081/L/R/



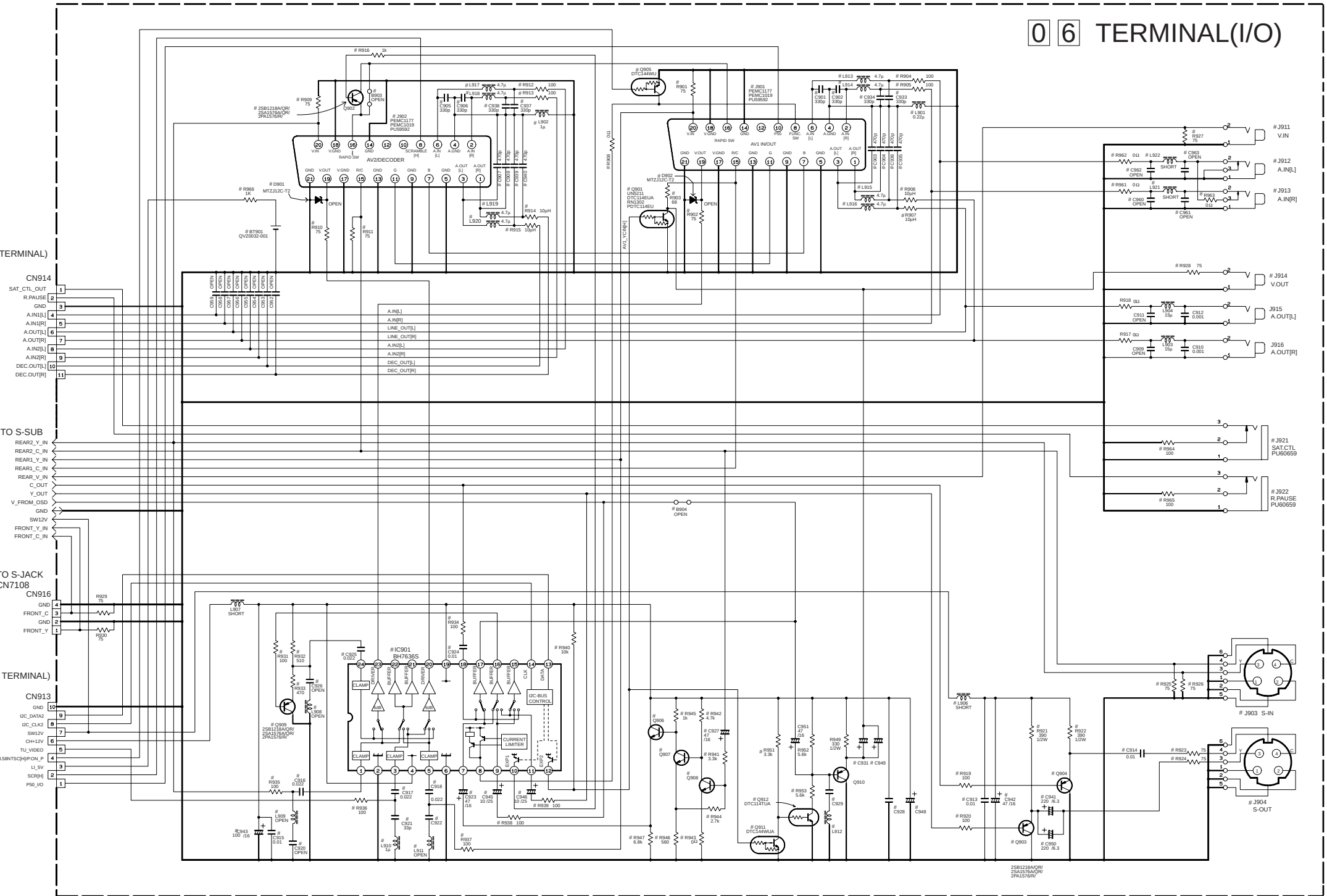
DIFFERENCE TABLE

	○ : Used	×	Not used
MS	○	×	
OTHERS	×	○	

NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

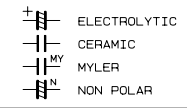
⎓ ELECTROLYTIC
⎓ CERAMIC
⎓ MYLER
⎓ NON POLAR

4.12 TERMINAL(I/O) SCHEMATIC DIAGRAM



# DIFFERENCE TABLE		O : Used X : Not used															
		CH+	REAR S-OUT	S-IN	REAR IN/OUT	SAT CTL	R.PAUSE	SW12VDECU				CEM-OUT DRIVER				BACK UP	
		R901-R908, R909-R916, R931-R947, R951-R953, L901-L902, L908-L911, L913-L916, L917-L920, C901, R903-R904, Q901-Q902, J901-J902	C901-C904, C905-C908, C916-C918, C920-C927, C933-C936, C937-C940, C945-C946, Q902, Q901-Q905, Q906-Q909, Q911-Q912	J904 R919-R924 C913-C914 C941-C942 C950 Q903-Q904 L906	J911-J914 R927-R928 R961-R963 L921-L922 C960-C963	J921 R964	J922 R965	C915	C943	C928	C948	C929	L912	C931	C949	R966 BT901	
EURO MODELS	WITHOUT REAR S-OUT	O	X	X	X	O	X		0.01	100/16	0.01	OPEN	OPEN	OPEN	10/25	OPEN	X
	WITH REAR S-OUT	O	O	X	X	O	O		0.01	100/16	0.01	OPEN	OPEN	OPEN	10/25	OPEN	X
ARC MODELS		X	O	O	O	X	X		OPEN	OPEN	0.01	47/16	5.6k	SHORT	220/6.3	220/6.3	O

NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.



ALL NPN TYPE TRANSISTORS ARE 2SC4081/QR/ or 2SD1819A/QR/ or 2PC4081/R/
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/ or 2SB1218A/QR/ or 2PA1576/R/

5

4

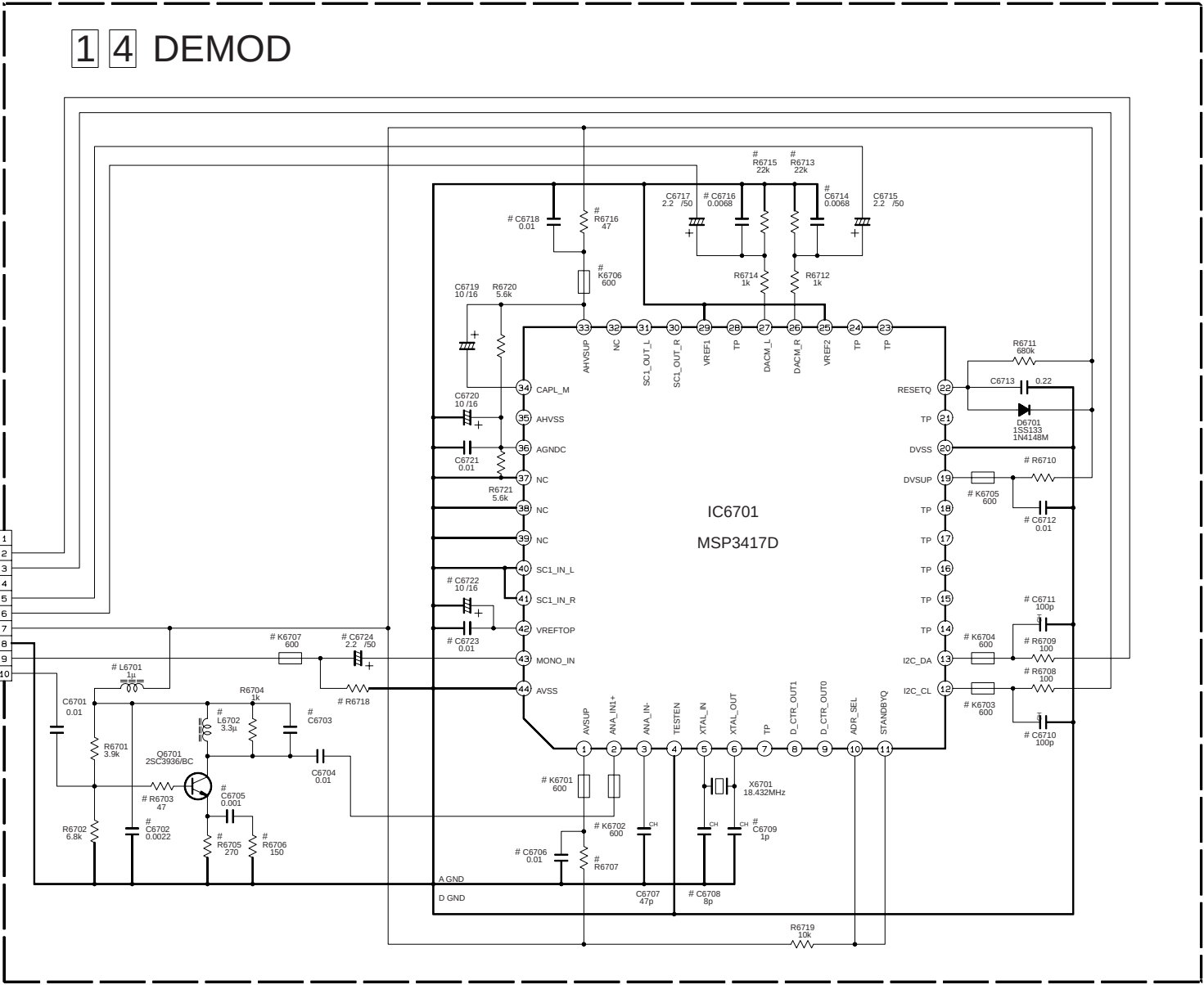
3

2

1

TO MAIN (TUNER)
CN6701

CN6701
1 NC
2 I2C_DATA
3 I2C_CLK
4 TU_A_MUTE
5 DEMOD_IR
6 DEMOD_IJ
7 SW5V
8 GND
9 COMP
10 SIF



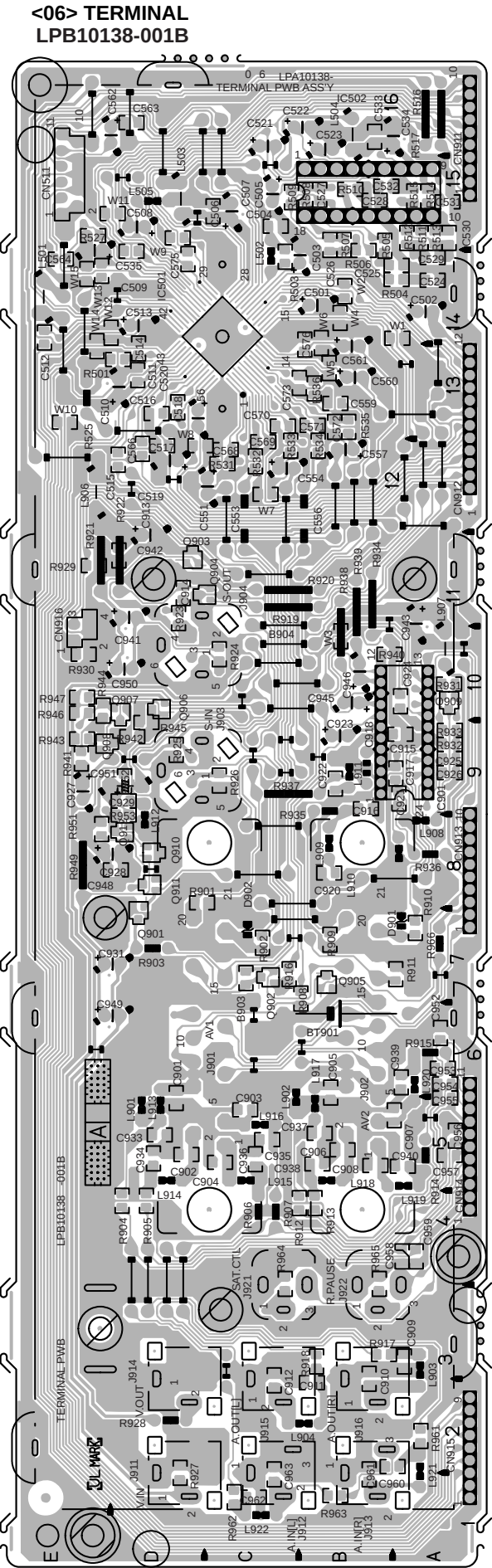
NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

⊕ — ELECTROLYTIC
— — CERAMIC
— MY — MYLER
— N — NON POLAR

DIFFERENCE TABLE O : Used x : Not used

		EU/EK	MS	KR	MS	EX/EK	AA/AG		
DEMOM PWB ASSY		LPA10094-09*	LPA10094-10*	LPA10094-11*	LPA10094-12*	LPA10094-13*	LPA10094-14*		
PRE AMP	R6703	0	0	47	0	0	0		
	R6705	270	270	270	270	270	270		
	R6706	×	×	100	×	×	×		
	C6702	×	×	×	×	×	×		
	C6703	×	×	×	×	×	180p		
	C6705	×	×	0.001	×	×	×		
	L6701	SHORT	SHORT	SHORT	SHORT	SHORT	SHORT		
MONO IN	L6702	×	×	3.3µ	×	×	3.3µ		
	K6707	×	FE 600	×	FE 600	×	×		
	C6724	×	0.22/50	×	0.22/50	×	×		
	R6718	×	×	×	×	×	×		
I2C-BUS	R6708	FE 600	FE 600	FE 600	FE 600	10k	10k		
	R6709	FE 600	FE 600	FE 600	FE 600	1k	1k		
	K6703	10k	0	1k	1k	FE 600	FE 600		
	K6704	0	0	1k	1k	FE 600	FE 600		
	C6710,C6711	×	×	×	×	×	×		
ANALOG Vcc	R6707	FE 600	FE 600	FE 600	39	0	0		
	K6701	33	33	39	FE 600	FE 600	FE 600		
	C6706	×	×	×	×	×	×		
DIGITAL Vcc	R6710	FE 600	FE 600	FE 600	12	0	0		
	K6705	0	10	12	FE 600	FE 600	FE 600		
	C6712	×	×	×	×	×	×		
DAC Vcc	R6716	FE 600	FE 600	FE 600	47	47	47		
	K6706	47	47	47	FE 600	FE 600	FE 600		
	C6718	×	×	×	×	×	×		
XTAL	C6708	7p	7p	7p	8p	7p	7p		
	C6709	3p	3p	3p	2p	3p	3p		
DAC OUT	R6713,R6715	12k	12k	×	×	○	○		
	C6714,C6716	0.0022	0.0068	0.0022	0.0068	0.0022	0.0022		
VREFTOP	C6722	×	×	×	×	×	×		
	C6723	0.01	0.01	0.001	0.01	0.01	0.01		

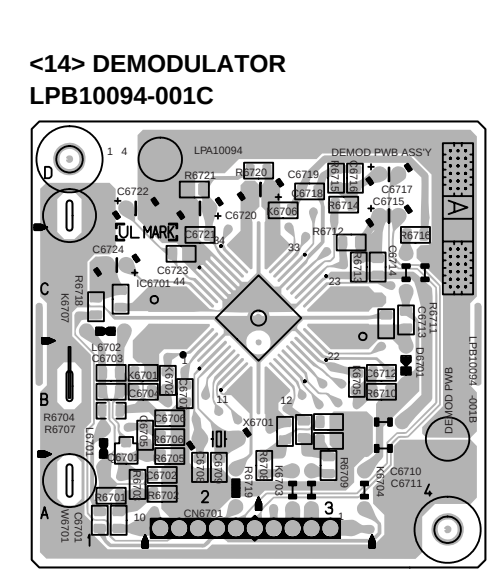
4.14 TERMINAL CIRCUIT BOARD



COMPONENT PARTS LOCATION GUIDE
<TERMINAL> LPB10138-001B

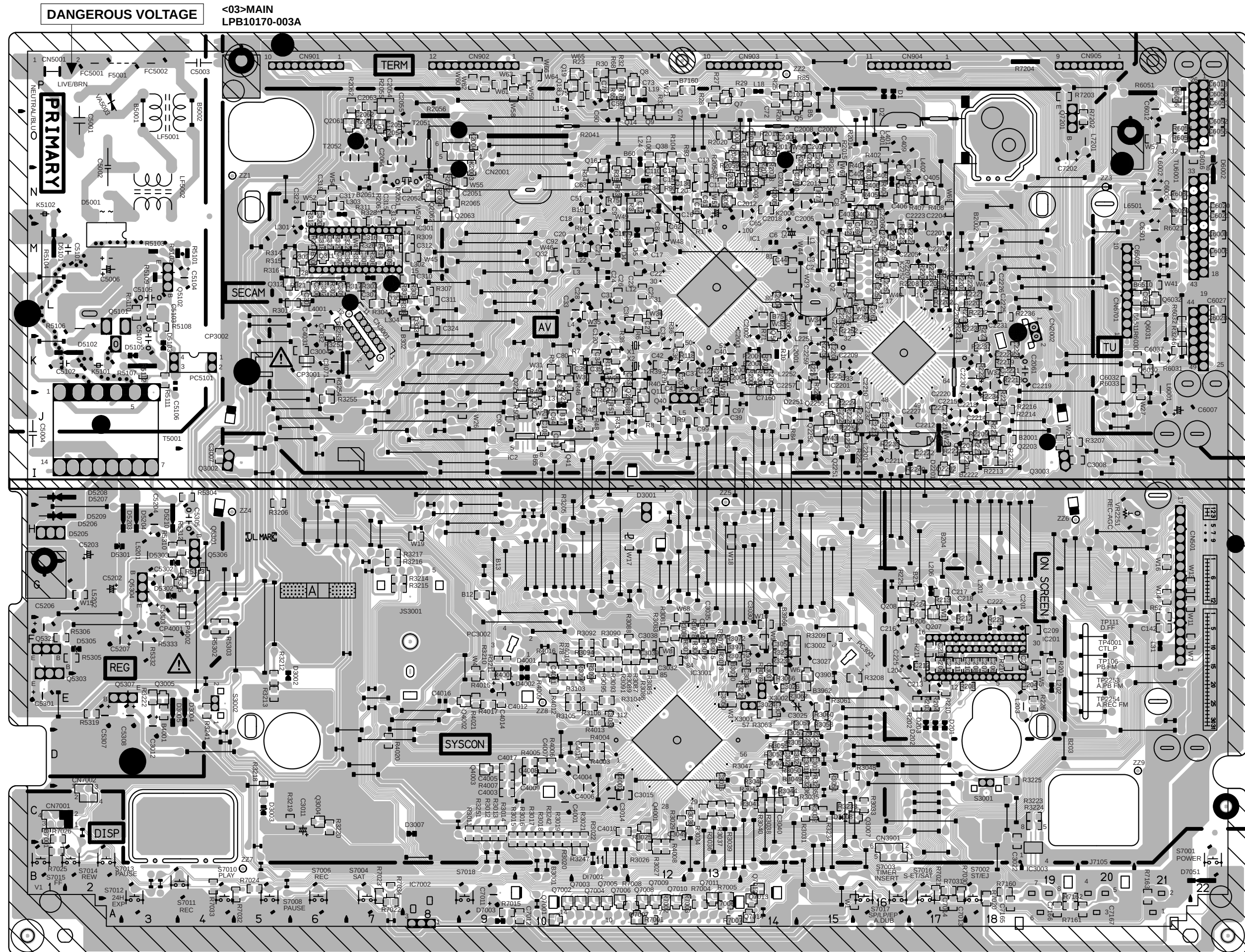
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR					
C501	A D 14B	C954	B C 6A	R535	B C 13B
C502	A D 14A	C955	B C 5A	R536	B C 13B
C503	A D 14B	C956	B C 5A	R901	B C 8D
C504	B C 15C	C957	B C 5A	R902	B C 7C
C505	A D 15C	C958	B C 4A	R903	A D 7D
C506	B C 15C	C959	B C 4A	R904	B C 4D
C507	A D 15C	C960	B C 2B	R905	B C 4D
C508	A D 15D	C961	B C 1B	R906	A D 4C
C509	A D 14E	C962	B C 1C	R907	A D 4C
C510	A D 13D	C963	B C 1C	R908	B C 7B
C511	B C 13D	CONNECTOR			
C512	B C 14E	CN511	A D 15E	R909	B C 7B
C513	A D 14D	CN911	A D 15A	R910	B C 7A
C514	B C 13D	CN912	A D 12A	R911	B C 7A
C515	B C 12D	CN913	A D 7A	R912	B C 4B
C516	B C 13D	CN914	A D 4A	R913	B C 4B
C517	B C 12D	CN915	A D 1A	R914	A D 5A
C518	B C 13D	CN916	A D 10E	R915	A D 6A
C519	A D 12D	DIODE			
C520	A D 13D	D901	A D 8A	R916	B C 7C
C521	A D 16C	D902	A D 7C	R917	B C 3B
C522	A D 16C	IC			
C523	A D 16B	IC501	B C 14C	R918	B C 3B
C524	B C 14A	IC502	A D 15B	R919	A D 11B
C525	B C 14A	IC901	A D 9B	R920	A D 11B
C526	B C 15B	JACK			
C527	B C 15B	J901	A D 6C	R921	A D 11E
C528	B C 15B	J902	A D 6B	R922	A D 11D
C529	B C 14A	J903	A D 9D	R923	B C 11D
C530	B C 15A	J904	A D 10D	R924	B C 10C
C531	B C 15A	J911	A D 2D	R925	B C 9D
C532	B C 15B	J912	A D 2C	R926	B C 9C
C533	B C 16B	J913	A D 2B	R927	B C 2D
C534	A D 16A	J914	A D 3D	R928	A D 2D
C535	B C 14D	J915	A D 3C	R929	B C 11E
C551	A D 12C	J916	A D 3B	R930	B C 10E
C553	A D 12C	J921	A D 4C	R931	B C 10A
C554	A D 12C	J922	A D 4B	R932	B C 9A
C556	A D 12B	COIL			
C557	A D 12B	L501	A D 14E	R933	B C 9A
C559	B C 13B	L502	A D 14C	R934	A D 11B
C560	A D 13B	L503	A D 15D	R935	A D 9B
C561	A D 13B	L504	A D 16B	R936	A D 8A
C562	A D 16D	L505	A D 15D	R937	A D 9B
C563	B C 16D	L901	A D 5D	R938	A D 11B
C564	B C 14E	L902	A D 5C	R939	A D 11B
C566	B C 12D	L903	A D 3A	R940	B C 10B
C568	B C 12C	L904	A D 2B	R941	B C 9E
C569	B C 12C	L906	A D 12E	R942	B C 9D
C570	B C 13C	L907	A D 10A	R943	B C 9E
C571	B C 13B	L908	A D 8A	R944	B C 10E
C572	B C 13B	L909	A D 8B	R945	B C 9D
C573	B C 13B	L910	A D 8A	R946	B C 10E
C575	B C 14D	L911	A D 9B	R947	B C 10E
C576	B C 13B	L912	A D 8D	R949	A D 8E
C901	B C 5D	L913	A D 6D	R951	B C 8E
C902	B C 5D	L914	A D 5D	R952	B C 9D
C903	B C 5C	L915	A D 5C	R953	B C 8D
C904	B C 5C	L916	A D 5C	R961	B C 2A
C905	B C 6B	L917	A D 6B	R962	B C 1C
C906	B C 5B	L918	A D 5B	R963	B C 1B
C907	B C 5A	L919	A D 5B	R964	B C 4C
C908	B C 5B	L920	A D 5A	R965	B C 4B
C909	B C 3A	L921	A D 2A	R966	A D 7A
C910	B C 3B	L922	A D 1C	OTHER	
C911	B C 2B	BT901 A D 6B			
C912	B C 2C	TRANSISTOR			
C913	B C 11D	Q901	B C 7D		
C914	B C 11D	Q902	B C 7C		
C915	B C 9A	Q903	B C 11D		
C916	B C 9B	Q904	B C 11D		
C917	B C 9A	Q905	B C 7B		
C918	A D 9B	Q906	B C 10D		
C920	B C 8B	Q907	B C 10D		
C921	B C 9A	Q908	B C 9E		
C922	B C 9B	Q909	B C 10A		
C923	A D 9B	Q910	B C 8D		
C924	B C 10A	Q911	B C 8D		
C925	B C 9A	Q912	B C 8D		
C926	B C 9A	RESISTOR			
C927	A D 9E	R501	B C 13D		
C928	B C 8D	R503	B C 14C		
C929	B C 9D	R504	B C 14A		
C931	A D 7E	R505	B C 15B		
C933	B C 5D	R506	B C 14B		
C934	B C 5D	R507	B C 15B		
C935	B C 5C	R508	B C 15B		
C936	B C 5C	R509	B C 15C		
C937	B C 5B	R510	B C 15B		
C938	B C 5B	R511	B C 15A		
C939	B C 6A	R512	B C 15A		
C940	B C 5A	R513	B C 15A		
C941	A D 11D	R514	B C 15A		
C942	A D 11D	R515	B C 15A		
C943	A D 11A	R516	A D 16A		
C945	A D 10B	R517	A D 16A		
C946	A D 10B	R525	A D 13E		
C948	A D 8E	R527	B C 15E		
C949	A D 6E	R531	B C 12C		
C950	A D 10D	R532	B C 12C		
C951	A D 9E	R533	B C 12C		
C952	B C 6A	R534	B C 12B		
C953	B C 6A				

4.15 DEMODULATOR CIRCUIT BOARD



COMPONENT PARTS LOCATION GUIDE
<DEMODULATOR> LPB10094-001C

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR					
C1501	A D 4C	C1520	A D 3A	R1509	A D 3B
C1502	A D 3D	C1521	A D 2C	R1510	A D 4B
C1503	A D 4D	CONNECTOR			
C1504	A D 4C	CN1501	A D 3A	R1511	A D 3A
C1505	A D 3D	IC			
C1506	A D 3C	IC1501	B C 2C	R1514	A D 2B
C1507	A D 2C	TRANSISTOR			
C1508	A D 1D	Q1501	A D 3B	R1515	A D 2C
C1509	A D 2C	Q1502	A D 3B	R1517	A D 2C
C1510	A D 1B	RESISTOR			
C1511	A D 1A	R1501	A D 4C		
C1512	A D 2A	R1502	A D 2C		
C1513	A D 2B	R1503	A D 2C		
C1514	A D 2A	R1504	A D 2B		
C1515	A D 3B	R1505	A D 2B		
C1516	A D 3C	R1506	A D 2B		
C1517	A D 3B	R1507	A D 2B		
C1518	A D 3A	R1508	A D 3B		
C1519	A D 3B				



COMPONENT PARTS LOCATION GUIDE <MAIN> LPB10170-003A

REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION
CAPACITOR	C321 B C 6M	C4004 A D 11D	D5302 A D 4G	Q2055 B C 14N	R2226 B C 19E	R3017 B C 10C	R4009 B C 10F	B302 B C 8L
C1 B C 15L	C322 B D 7M	C4005 B C 9D	D5303 A D 4F	Q2061 B C 70	R3018 B C 6L	R3018 B C 10C	R4010 B C 11F	B2001 B C 18J
C2 B C 15M	C323 A D 6N	C4006 A D 11C	D5305 A D 2F	Q2062 B C 8N	R3019 B C 6L	R3019 B C 10C	R4012 B C 10E	B2002 B C 18M
C3 B C 16M	C324 B C 8L	C4007 B C 10D	D6002 A D 22N	Q2063 B C 8N	R3020 B C 7L	R3020 B C 10C	R4013 B C 11E	B2051 A D 7N
C4 B C 16M	C4010 B C 16G	C4008 B C 10D	D7051 A D 22B	Q2201 B C 18I	R3021 B C 7L	R3021 B C 11C	R4015 B C 9E	B2201 B C 17L
C5 A D 14M	C402 B C 16N	C4009 B C 10D		Q2202 B C 17I	R3022 B C 8L	R3022 B C 11C	R4016 B C 10F	B2221 A D 19I
C6 A D 14M	C403 B C 15N	C4010 B C 11C		Q2203 B C 18J	R3023 B C 7M	R3023 B C 12C	R4017 B C 9E	B2222 B C 17I
C7 B C 15N	C404 B C 17N	C4011 B C 10F	FUSE	Q2204 B C 18J	R3024 B C 8L	R3024 B C 12B	R4020 B C 7D	B3001 A D 10B
C8 B C 15N	C405 B C 16N	C4012 A D 9E	F5001 A D 2P	Q2221 B C 15I	R3025 B C 8L	R3025 B C 12B	R4021 B C 9E	B3070 B C 13F
C9 A D 11M	C406 B C 16N	C4014 B C 9E		Q2222 B C 15J	R3026 B C 8M	R3026 B C 12C	R5101 A D 4M	B3071 A D 15E
C10 B C 13N	C407 B C 16N	C4015 B C 11D	IC	Q2223 B C 15J	R3027 B C 7M	R3027 B C 13C	R5102 A D 4M	B3966 A D 14G
C11 B C 13N	C408 A D 16G	C4016 A D 8E	IC1 B C 13L	Q2224 B C 15J	R3028 B C 7N	R3028 B C 15C	R5103 A D 3M	B3971 B C 13F
C12 B C 12N	C2001 A D 13K	C4017 B C 9D	IC2 B C 10J	Q2225 B C 15J	R3029 B C 6N	R3029 B C 15C	R5104 A D 2L	B4001 B C 3E
C13 B C 13N	C2002 A D 14L	C4031 A D 6L	IC201 A D 19E	Q3002 A D 5I	R3030 B C 6M	R3030 B C 16C	R5106 A D 3L	B5002 A D 3P
C14 B C 12N	C2003 A D 14L	C4032 B C 6I	IC201 A D 6M	Q3003 A D 19I	R3031 B C 5M	R3031 B C 13C	R5107 A D 3L	B5002 A D 4P
C15 B C 12N	C2004 B C 14L	C5001 A D 2P	IC2201 B C 16K	Q3004 B C 6C	R3032 B C 5M	R3032 B C 14C	R5108 A D 3L	B6510 B C 21L
C16 B C 12N	C2005 A D 15N	C5002 A D 2M	IC3001 B C 12D	Q3005 A D 3E	R3033 B C 6M	R3033 B C 13C	R5109 A D 3M	B6511 B C 21L
C17 A D 12M	C2006 B C 15O	C5003 A D 4J	IC3002 B C 14F	Q3007 B C 16C	R3034 B C 6M	R3034 B C 13C	R5110 A D 3L	B7160 B C 1C
C18 A D 11N	C2007 A D 15O	C5004 A D 1J	IC3003 B C 19B	Q3901 B C 15E	R3035 B C 8L	R3035 B C 14C	R5111 B C 3K	CP3001 A D 13P
C19 A D 11M	C2008 A D 15O	C5006 A D 2M	IC7002 A D 8A	Q4001 B C 12C	R3036 B C 6L	R3036 B C 13C	R5112 B C 3K	CP3002 A D 6K
C20 A D 11M	C2009 B C 14O	C5101 A D 2M		Q4002 B C 9E	R3037 B C 7M	R3037 B C 14C	R5122 B C 4F	CP3002 A D 3G
C21 B C 11M	C2010 B C 15N	C5102 A D 1K	COIL	Q4003 B C 9D	R3038 B C 7M	R3038 B C 14C	R5123 B C 4F	CP4002 B C 4G
C22 A D 12M	C2011 A D 14N	C5103 B C 1K	K2001 B C 15O	Q5101 A D 2L	R3039 B C 6M	R3039 B C 14C	R5124 B C 2F	DI7001 A D 12A
C23 B C 12M	C2012 A D 13N	C5104 A D 4M	K2002 B C 15O	Q5102 A D 3M	R3040 B C 16O	R3040 B C 14D	R5125 B C 3H	FC5001 A D 2P
C24 A D 11L	C2013 B C 15N	C5105 A D 3L	K2003 B C 9N	Q5301 A D 4G	R3041 B C 16N	R3041 B C 14D	R5126 B C 4H	FC5002 A D 20A
C25 B C 12L	C2014 B C 12K	C5106 A D 3J	K2004 B C 9O	Q5303 A D 1F	R3042 B C 16N	R3042 B C 14D	R5127 B C 4H	JS3001 A D 8G
C26 B C 11L	C2016 B C 15O	C5107 A D 3L	K2005 B C 14N	Q5304 A D 3G	R3043 B C 16N	R3043 B C 15D	R5128 B C 2E	LF5002 A D 4P
C27 B C 12L	C2017 B C 14O	C5202 A D 2G	K2006 B C 14N	Q5305 B C 4G	R3044 B C 16N	R3044 B C 14D	R5129 B C 2E	LF5002 A D 3N
C28 A D 11L	C2018 B C 14N	C5203 A D 2H	K2251 B C 16M	Q5306 B C 4G	R3045 B C 16N	R3045 B C 14D	R5130 B C 2E	PC3001 A D 15F
C29 B C 11K	C2051 B C 8N	C5204 A D 3F	K2252 B C 16M	Q5307 A D 3E	R3046 B C 16N	R3046 B C 15D	R5131 B C 2E	PC3002 A D 9F
C30 B C 12L	C2052 A D 7N	C5206 A D 1F	K5101 B C 16M	Q5321 A D 1F	R3047 B C 17N	R3047 B C 14D	R5132 B C 2E	PC3002 A D 15F
C31 A D 11L	C2053 B C 7O	C5207 A D 3E	K5102 A D 2K	Q6030 B C 21K	R3048 B C 13K	R3048 B C 15D	R5133 B C 2E	PC5101 A D 4K
C32 B C 12L	C2054 B C 7P	C5301 A D 1E	L1 A D 15M	Q6031 B C 21L	R3049 B C 13K	R3049 B C 14D	R5134 B C 2E	T2051 A D 7O
C33 A D 11L	C2055 A D 8O	C5302 A D 3G	L2 A D 12N	Q6032 B C 21L	R3050 B C 13K	R3050 B C 14D	R5135 B C 2E	T2052 A D 6O
C34 B C 11K	C2061 A D 19K	C5303 A D 3G	L3 A D 10M	Q7001 B C 10A	R3051 B C 13K	R3051 B C 14D	R5136 B C 2E	T5001 A D 1K
C35 B C 11K	C2062 B C 7O	C5305 A D 2E	L4 A D 11L	Q7002 B C 11A	R3052 B C 14K	R3052 B C 15E	R5137 B C 2E	TU6001 A D 22P
C36 A D 12K	C2063 B C 7P	C5307 A D 2E	L5 A D 13L	Q7003 B C 11A	R3053 B C 14K	R3053 B C 15E	R5138 B C 2E	VA5003 A D 2O
C37 A D 12K	C2064 A D 7O	C5308 A D 3E	L12 A D 12L	Q7004 B C 11A	R3054 B C 14K	R3054 B C 15E	R5139 B C 2E	VR2251 A D 20H
C38 A D 13K	C2201 A D 17M	C6005 A D 21N	L13 A D 11J	Q7005 B C 11A	R3055 B C 14K	R3055 B C 15E	R5140 B C 2E	X1 A D 12K
C39 B C 13J	C2202 A D 17M	C6006 B C 22M	L14 A D 10P	Q7006 B C 11A	R3056 B C 14K	R3056 B C 15E	R5141 B C 2E	X2 A D 12K
C40 A D 13K	C2203 A D 17L	C6007 A D 21J	L15 A D 11J	Q7007 B C 12A	R3057 B C 14K	R3057 B C 15E	R5142 B C 2E	X3001 A D 14E
C41 B C 12K	C2204 A D 17M	C6008 B C 22M	L18 A D 14P	Q7008 B C 12A	R3058 B C 15O	R3058 B C 14E	R5143 B C 2E	X3002 A D 14E
C42 B C 12K	C2205 A D 16M	C6012 A D 21O	L19 A D 12F	Q7009 B C 12A	R3059 B C 15O	R3059 B C 14E	R5144 B C 2E	
C43 B C 13J	C2206 A D 16M	C6013 B C 22P	L20 A D 12N	Q7010 B C 12A	R3060 B C 15O	R3060 B C 14E	R5145 B C 2E	
C44 B C 14M	C2207 B C 16M	C6016 B C 22O	L22 A D 11M	Q7011 B C 13A	R3061 B C 15O	R3061 B C 13F	R5146 B C 2E	
C45 B C 13K	C2208 B C 15K	C6020 B C 22N	L24 A D 12O	Q7012 B C 14B	R3062 B C 14O	R3062 B C 13F	R5147 B C 2E	
C51 A D 11N	C2209 A D 15K	C6021 B C 22N	L27 A D 10J	Q7013 B C 14A	R3063 B C 14N	R3063 B C 13F	R5148 B C 2E	
C53 B C 12K	C2210 A D 16K	C6027 B C 22L	L28 A D 12N	Q7014 B C 14A	R3064 B C 14N	R3064 B C 13F	R5149 B C 2E	
C59 B C 11P	C2211 A D 16I	C6028 B C 22L	L31 A D 21P	Q7201 A D 19P	R3065 B C 14N	R3065 B C 13F	R5150 B C 2E	
C60 A D 11P	C2212 A D 16J	C6032 A D 20K	L201 A D 18G		R3066 B C 13O	R3066 B C 13F	R5151 B C 2E	
C61 B C 13N	C2213 B C 16J	C6037 A D 21K	L202 A D 19E	RESISTOR	R2041 A D 11O	R3067 B C 13F	R5152 B C 2E	
C62 B C 12M	C2214 A D 18J	C6038 B C 21L	L203 A D 19E	R1 B C 13M	R2051 B C 8N	R3068 B C 13F	R5153 B C 2E	
C63 B C 11N	C2215 A D 17J	C6052 B C 22O	L204 A D 17E	R2 B C 13N	R2052 B C 8N	R3069 B C 13F	R5154 B C 2E	
C64 B C 10J	C2216 A D 17J	C6053 B C 22P	L206 A D 17G	R3 B C 12N	R2053 B C 8N	R3070 B C 13F	R5155 B C 2E	
C65 A D 14N	C2217 B C 17J	C6055 B C 22P	L301 A D 6M	R4 B C 10K	R2054 B C 7O	R3071 B C 12F	R5156 B C 2E	
C69 B C 16M	C2218 A D 18J	C6056 B C 22P	L302 A D 7M	R5 B C 12L	R2055 B C 7P	R3072 B C 12F	R5157 B C 2E	
C70 B C 16M	C2219 A D 18K	C6501 A D 21M	L303 A D 7N	R6 B C 11K	R2056 A D 8O	R3073 B C 12F	R5158 B C 2E	
C72 B C 14P	C2220 A D 18J	C6502 A D 21M	L304 A D 8L	R7 B C 12J	R2057 B C 13N	R3074 B C 12F	R5159 B C 2E	
C73 B C 12P	C2221 B C 18K	C7011 A D 9A	L401 A D 16N	R8 B C 12J	R2058 B C 13N	R3075 B C 12F	R5160 B C 2E	
C74 B C 12O	C2222 B C 17I	C7012 B C 10A	L402 A D 17O	R9 B C 12J	R2059 A D 13O	R3076 B C 12F	R5161 B C 2E	
C75 B C 11P	C2223 B C 16M	C7013 B C 17A	L2001 A D 14K	R10 B C 14K	R2060 B C 14O	R3077 B C 11F	R5162 B C 2E	
C78 B C 11P	C2224 B C 15J	C7014 B C 17A	L2201 A D 16J	R11 B C 15M	R2061 B C 7O	R3078 B C 11F	R5163 B C 2E	
C80 B C 10K	C2225 A D 18L	C7160 B C 14K	L2251 A D 14L	R12 B C 11P	R2062 B C 7P	R3079 B C 11F	R5164 B C 2E	
C84 B C 10K	C2226 A D 18L	C7165 B C 18A	L2252 A D 15K	R13 B C 14P	R2063 A D 7O	R3080 B C 11F	R5165 B C 2E	
C87 B C 12N	C2227 A D 16J	C7166 B C 19A	L4001 A D 6L	R14 B C 14P	R2064 B C 8N	R3081 B C 11F	R5166 B C 2E	
C88 B C 11M	C2228 B C 18K	C7167 B C 19A	L5201 A D 3H	R15 B C 13P	R2065 B C 8N	R3082 B C 11F	R5167 B C 2E	
C90 B C 9J	C2229 B C 18K	C7202 A D 20A	L5202 A D 2G	R16 B C 13P	R2201 B C 17L	R3083 B C 11F	R5168 B C 2E	
C92 B C 11M	C2230 A D 18K		L6001 A D 21J	R17 B C 13P	R2202 B C 17L	R3084 B C 11F	R5169 B C 2E	
C97 B C 13J	C2231 A D 18K	CONNECTOR	L6002 A D 21O	R18 B C 11P	R2203 B C 17L	R3085 B C 11F	R5170 B C 2E	
C99 B C 13J	C2232 B C 16J	CN1 A D 16M	L6501 A D 21N	R19 B C 12O	R2204 B C 17L	R3086 B C 11E	R5171 B C 2E	
C103 B C 14O	C2233 B C 16J	CN501 A D 6P	L7201 A D 20O	R20 B C 11P	R2205 B C 17M	R3087 B C 11E	R5172 B C 2E	
C106 B C 12O	C2234 B C 16M	CN901 A D 6P		R21 B C 11N	R2206 B C 17L	R3088 B C 11E	R5173 B C 2E	
C108 B C 10J	C2235 B C 16L	CN902 A D 10P	TRANSISTOR	R22 B C 11N	R2207 B C 17M	R3089 B C 11E	R5174 B C 2E	
C110 B C 12N	C2236 A D 15L	CN903 A D 14P	Q1 B C 15M	R23 B C 11N	R2208 B C 17L	R3090 B C 11E	R5175 B C 2E	
C114 B C 10J	C2237 A D 15L	CN904 A D 17P	Q2 B C 15M	R24 B C 12K	R2209 B C 18J	R3091 B C 11E	R5176 B C 2E	
C120 A D 11K	C2238 B C 15L	CN905 A D 20P	Q3 B C 15M	R25 B C 11K	R2210 B C 18J	R3092 B C 11E	R5177 B C 2E	
C125 B C 13K	C2239 B C 15K	CN2001 A D 9O	Q4 B C 15M	R26 B C 12K	R2211 B C 18J	R3093 B C 11E	R5178 B C 2E	
C136 B C 12N	C2240 B C 15K	CN2002 A D 19L	Q5 B C 15P	R27 B C 11J	R2212 B C 18J	R3094 B C 11E	R5179 B C 2E	
C142 B C 21F	C2241 B C 15K	CN3001 A D 7L	Q6 B C 13P	R28 B C 11J	R2213 B C 18J	R3095 B C 11E	R5180 B C 2E	
C201 A D 18F	C2242 B C 16L	CN3001 A D 16B	Q7 B C 12F	R29 B C 11J	R2214 B C 18J	R3096 B C 11E	R5181 B C 2E	
C202 B C 19F	C2243 B C 16L	CN5001 A D 1P	Q8 B C 12F	R30 B C 11J	R2215 B C 18J	R3097 B C 11E	R5182 B C 2E	
C204 B C 19E	C2244 B C 16L	CN6701 A D 20L	Q9 B C 11K	R31 B C 11J	R2216 B C 18J	R3098 B C 11E	R5183 B C 2E	
C206 B C 18F	C3004 B C 6K	CN7001 A D 1C	Q10 B C 12J	R32 B C 11J	R2217 B C 18J	R3099 B C 11E	R5184 B C 2E	
C207 B C 18F	C3007 B C 4I	CN7002 A D 2C	Q11 B C 12J	R33 B C 12O	R2218 B C 18K	R3100 B C 11E	R5185 B C 2E	
C208 B C 18F	C3008 B C 19I		Q12 B C 12O	R34 B C 11O	R2219 B C 18K	R3101 B C 11E	R5186 B C 2E	
C209 B C 19F	C3011 A D 6C	DIODE	Q13 B C 11O	R35 B C 12N	R2220 B C 17I	R3102 B C 11E	R5187 B C 2E	
C210 B C 18F	C3012 A D 3E	D1 A D 16P	Q14 B C 12N	R36 B C 11P	R2221 B C 17M	R3103 B C 11E	R5188 B C 2E	
C211 B C 17F	C3014 A D 11C	D2 A D 16P	Q15 B C 11P	R37 B C 10J	R2222 B C 16M	R3104 B C 11E	R5189 B C 2E	
C212 B C 17F	C3015 B C 11C	D3 A D 11M	Q16 B C 11M	R38 B C 10J	R2223 B C 15J	R3105 B C 11E	R5190 B C 2E	
C213 A D 17E	C3016 B C 13D	D4 A D 12N	Q17 B C 11P	R39 B C 10J	R2224 B C 15J	R3106 B C 11E	R5191 B C 2E	
C214 B C 17F	C3017 B C 15D	D5 A D 17E	Q18 B C 14L	R40 B C 12K	R2225 B C 18L	R3107 B C 11E	R5192 B C 2E	
C215 B C 17F	C3018 B C 15D	D6 A D 17E	Q19 B C 12K	R41 B C 11P	R2226 B C 18L	R3108 B C 11E	R5193 B C 2E	
C216 A D 16F	C3019 B C 15D	D7 A D 17E	Q20 B C 11P	R42 B C 15N	R2227 B C 17L	R3109 B C 11E	R5194 B C 2E	
C217 B C 17G	C3020 B C 14D	D8 A D 17E	Q21 B C 10F	R43 B C 10F	R2228 B C 18L	R3110 B C 11E	R5195 B C 2E	
C218 A D 17G	C3021 B C 14C	D9 A D 17E	Q22 B C 12K	R44 B C 12K	R2229 B C 17L	R3111 B C 11E	R5196 B C 2E	
C222 A D 18G	C3022 B C 14C	D10 A D 17E	Q23 B C 10F	R45 B C				

COMPONENT PARTS LOCATION GUIDE <MAIN> LPB10170-004A

REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION
CAPASITOR									
C1 B C 15L	C321 B C 6M	C4004 A D 11D	D5302 A D 4G	Q2253 B C 15J	R310 B C 7M	R3030 B C 13C	R5102 A D 4M	B3966 A D 14G	
C2 B C 15M	C322 B C 7M	C4005 B C 9D	D5303 A D 4G	Q2254 B C 15J	R311 B C 7N	R3031 B C 15C	R5103 A D 3M	B3971 B C 13F	
C3 B C 15M	C323 A D 6L	C4006 A D 11C	D5305 A D 2F	Q2255 B C 15J	R312 B C 6N	R3032 B C 15C	R5104 A D 1L	B4001 B C 3E	
C4 B C 16M	C324 B C 8L	C4007 B C 10D	D6002 A D 22N	Q3002 A D 5I	R313 B C 6M	R3033 B C 16C	R5106 A D 2L	B5001 A D 3P	
C5 A D 14M	C401 B C 16O	C4008 B C 10D	D7003 A D 9A	Q3003 A D 19I	R314 B C 5M	R3034 B C 13C	R5107 A D 3K	B5002 A D 4P	
C6 A D 14M	C402 B C 16N	C4009 B C 10D	D7051 A D 22B	Q3004 B C 6C	R315 B C 5M	R3035 B C 14C	R5108 B C 3L	B6510 A D 21L	
C7 B C 15N	C403 B C 15N	C4010 B C 11C	D7001 A D 12A	Q3005 B C 3E	R316 B C 6M	R3036 B C 13C	R5109 A D 3M	B6511 B C 21C	
C8 B C 15N	C404 B C 17N	C4011 B C 10F		Q3007 B C 16C	R317 B C 7L	R3037 B C 13C	R5110 B C 3L	B7001 B C 1C	
C9 A D 11M	C405 B C 16N	C4012 A D 9E	FUSE		R318 B C 8L	R3038 B C 14C	R5111 B C 3K	B7160 B C 13P	
C10 B C 13N	C406 B C 16N	C4013 A D 9E	F5001 A D 2P	Q4001 B C 15C	R319 B C 6L	R3039 B C 13C	R5112 B C 3K	CP3001 A D 6K	
C11 B C 13N	C407 B C 16N	C4014 B C 11D		Q4002 B C 9E	R320 B C 7M	R3040 B C 14C	R5302 B C 4F	CP3002 A D 6K	
C12 B C 12N	C408 A D 8E	C4015 A D 8E		Q4003 B C 9D	R321 B C 7M	R3041 B C 14C	R5303 B C 4F	CP4001 A D 3G	
C13 B C 12N	C2001 A D 13K	C4016 A D 9D		Q5101 A D 2L	R322 B C 7N	R3042 B C 14C	R5304 B C 4F	CP4002 A D 4G	
C14 B C 12N	C2002 A D 14L	C4017 A D 6L		Q5102 A D 2L	R323 B C 6M	R3043 B C 14C	R5305 B C 4F	CP4003 A D 2P	
C15 B C 12N	C2003 A D 14L	C4018 A D 6L		Q5103 A D 2L	R324 B C 16O	R3044 B C 14C	R5306 B C 1F	FC5002 A D 3P	
C16 B C 12N	C2004 B C 14L	C5001 A D 2P		Q5104 A D 2L	R325 B C 16N	R3045 B C 14C	R5307 B C 3H	J7105 A D 20A	
C17 A D 12M	C2005 A D 15N	C5002 A D 2N		Q5105 A D 2L	R326 B C 16N	R3046 B C 15D	R5308 B C 4H	JS3001 A D 8G	
C18 A D 11M	C2006 B C 15O	C5003 A D 4P		Q5106 A D 2L	R327 B C 16N	R3047 B C 14C	R5309 B C 4G	K2001 B C 15O	
C19 A D 11M	C2007 A D 15O	C5004 A D 1J		Q5107 A D 2L	R328 B C 16N	R3048 B C 14C	R5310 B C 2E	K2002 B C 15O	
C20 A D 11M	C2008 A D 15O	C5005 A D 2M		Q5108 A D 2L	R329 B C 16N	R3049 B C 14C	R5311 B C 3F	K2003 B C 9N	
C21 B C 11M	C2009 B C 14O	C5101 A D 2M		Q5109 A D 2L	R330 B C 16N	R3050 B C 14C	R5312 A D 3F	K2004 B C 14N	
C22 A D 12M	C2010 B C 15N	C5102 A D 1K		Q5110 A D 2L	R331 B C 17N	R3051 B C 14C	R6020 B C 21N	K2005 B C 9O	
C23 A D 12M	C2011 A D 14N	C5103 B C 3L		Q6030 B C 21L	R332 B C 17N	R3052 B C 15D	R6021 B C 21N	K2006 B C 14N	
C24 B C 12M	C2012 A D 13N	C5104 A D 4M		Q6031 B C 21L	R333 B C 13K	R3053 B C 15D	R6022 B C 21K	K2251 B C 16L	
C25 A D 11L	C2013 B C 15N	C5105 A D 3L		Q7001 B C 10A	R334 B C 13K	R3054 B C 14C	R6023 B C 21K	K2252 B C 16M	
C26 B C 12L	C2014 B C 12K	C5106 A D 3L		Q7002 B C 10A	R335 B C 13K	R3055 B C 14C	R6024 B C 21K	K2253 B C 16M	
C27 B C 12L	C2015 B C 15O	C5107 A D 3L		Q7003 B C 11A	R336 B C 14K	R3056 B C 15E	R6025 B C 20K	K5101 A D 2K	
C28 A D 11L	C2016 B C 14O	C5202 A D 2G		Q7004 B C 11A	R337 B C 14K	R3057 B C 15E	R6026 B C 21O	K5102 A D 1N	
C29 B C 11K	C2017 B C 14N	C5203 A D 2H		Q7005 B C 11A	R338 B C 14K	R3058 B C 15E	R6027 A D 21P	LF5001 A D 4P	
C30 B C 12L	C2018 B C 8N	C5204 A D 3H		Q7006 B C 11A	R339 B C 14K	R3059 B C 15E	R6028 B C 21P	LF5002 A D 3N	
C31 A D 11L	C2019 B C 7N	C5205 A D 1F		Q7007 B C 12A	R340 B C 14K	R3060 B C 15E	R6029 B C 21P	PC3001 A D 15F	
C32 B C 12L	C2020 B C 7P	C5206 A D 3F		Q7008 B C 12A	R341 B C 14K	R3061 B C 15E	R6030 B C 21N	PC3002 A D 9F	
C33 A D 11L	C2021 A D 8O	C5207 A D 1E		Q7009 B C 12A	R342 B C 15N	R3062 B C 14E	R6031 B C 12A	PC5101 A D 4K	
C34 B C 11K	C2022 A D 8O	C5208 A D 3G		Q7010 B C 12A	R343 B C 15O	R3063 B C 14E	R6032 B C 12A	T2051 A D 7O	
C35 B C 11K	C2023 A D 9K	C5209 A D 4H		Q7011 B C 13A	R344 B C 15O	R3064 B C 13F	R6033 B C 13A	T2052 A D 6O	
C36 A D 12K	C2024 B C 7P	C5210 A D 2E		Q7012 B C 14B	R345 B C 14O	R3065 B C 13F	R6034 B C 13A	T5001 A D 1K	
C37 A D 12K	C2025 A D 7O	C5211 A D 3E		Q7013 B C 14A	R346 B C 14N	R3066 B C 13F	R6035 B C 13A	TU6001 A D 22P	
C38 A D 13K	C2026 A D 17M	C5212 A D 21N		Q7014 B C 14A	R347 B C 14N	R3067 B C 13F	R6036 B C 13A	VA5003 A D 2O	
C39 B C 13J	C2027 A D 17M	C6005 B C 22M		Q7201 A D 19P	R348 B C 13O	R3068 B C 13F	R6037 B C 12A	VR2251 A D 20K	
C40 A D 13K	C2028 A D 17L	C6006 B C 21J			R349 B C 13O	R3069 B C 13F	R6038 B C 9A	X1 A D 12K	
C41 B C 12K	C2029 A D 17M	C6007 A D 21J		RESISTOR					
C42 B C 12K	C2030 A D 17M	C6008 B C 22M		R1 B C 13M	R2051 B C 8N	R3070 B C 13F	R6039 B C 18A	X2 A D 12K	
C43 B C 13J	C2031 A D 16M	C6009 A D 21O		R2 B C 13N	R2052 B C 8N	R3071 B C 13F	R6040 B C 17B	X3001 A D 14E	
C44 B C 14M	C2032 A D 16M	C6010 B C 22P		R3 B C 12N	R2053 B C 8N	R3072 B C 13F			
C45 B C 13K	C2033 A D 16M	C6011 B C 22O		R4 B C 10K	R2054 B C 7O	R3073 B C 12F			
C51 A D 11N	C2034 B C 15K	C6012 B C 22N		R5 B C 12L	R2055 B C 7P	R3074 B C 12F			
C53 B C 12K	C2035 A D 16K	C6013 B C 22L		R6 B C 11K	R2056 A D 8O	R3075 B C 12F			
C59 B C 11P	C2036 A D 16J	C6014 B C 22L		R7 B C 12J	R2057 B C 13N	R3076 B C 12F			
C60 A D 11P	C2037 A D 16J	C6015 B C 20K		R8 B C 12J	R2058 B C 13N	R3077 B C 12F			
C61 B C 13N	C2038 A D 16J	C6016 A D 21K		R9 B C 16M	R2059 B C 14O	R3078 B C 11F			
C62 B C 12M	C2039 A D 18J	C6017 B C 21L		R10 A D 14K	R2060 B C 13O	R3079 B C 11F			
C63 B C 11N	C2040 A D 17J	C6018 B C 21L		R11 B C 16M	R2061 B C 7O	R3080 B C 11F			
C64 B C 10J	C2041 A D 17J	C6019 B C 22P		R12 B C 11P	R2062 B C 7P	R3081 B C 11F			
C65 A D 14N	C2042 A D 17J	C6020 B C 22O		R13 B C 14P	R2063 A D 7O	R3082 B C 11F			
C69 B C 16M	C2043 A D 18J	C6021 B C 22P		R14 B C 14P	R2064 B C 8N	R3083 B C 11F			
C70 B C 16M	C2044 A D 18K	C6022 B C 22P		R15 B C 13P	R2065 B C 8N	R3084 B C 11F			
C72 B C 14P	C2045 A D 18J	C6023 A D 21M		R16 B C 13P	R2066 B C 17L	R3085 B C 11F			
C73 B C 12P	C2046 A D 18K	C6024 A D 21M		R17 B C 13P	R2067 B C 17L	R3086 B C 11F			
C74 B C 12P	C2047 A D 18K	C6025 A D 21O		R18 B C 11P	R2068 B C 17L	R3087 B C 11F			
C75 B C 11P	C2048 A D 17I	C6026 A D 10A		R19 B C 12O	R2069 B C 17L	R3088 B C 11E			
C76 B C 11P	C2049 A D 16M	C6027 A D 17A		R20 B C 11P	R2070 B C 17M	R3089 B C 11E			
C77 B C 11P	C2050 A D 15J	C6028 A D 17A		R21 B C 11N	R2071 B C 17M	R3090 B C 11E			
C78 B C 10K	C2051 A D 18L	C6029 B C 14K		R22 B C 11N	R2072 B C 17M	R3091 B C 11E			
C79 B C 10K	C2052 A D 18L	C6030 B C 18A		R23 B C 11N	R2073 B C 17L	R3092 B C 11E			
C80 B C 10K	C2053 A D 16J	C6031 B C 19A		R24 B C 12K	R2074 B C 18J	R3093 B C 11E			
C81 B C 12N	C2054 A D 18K	C6032 B C 19A		R25 B C 11K	R2075 B C 18J	R3094 B C 11E			
C82 B C 12M	C2055 A D 18K	C6033 B C 20A		R26 B C 12K	R2076 B C 18J	R3095 B C 11E			
C83 B C 11M	C2056 A D 18K	C6034 B C 19O		R27 B C 11J	R2077 B C 18J	R3096 B C 11E			
C84 B C 9J	C2057 A D 18K	C6035 B C 15P		R28 B C 11J	R2078 B C 18J	R3097 B C 11E			
C85 B C 11M	C2058 A D 18K	C6036 B C 13P		R29 B C 11J	R2079 B C 18J	R3098 B C 11E			
C86 B C 13J	C2059 A D 18K	C6037 B C 12P		R30 B C 11J	R2080 B C 18J	R3099 B C 11E			
C87 B C 13J	C2060 A D 18K	C6038 B C 12O		R31 B C 11J	R2081 B C 18J	R3100 B C 11E			
C88 B C 13J	C2061 A D 18K	C6039 B C 12O		R32 B C 11J	R2082 B C 18J	R3101 B C 11E			
C89 B C 13J	C2062 A D 18K	C6040 B C 12O		R33 B C 11J	R2083 B C 18J	R3102 B C 11E			
C90 B C 13J	C2063 A D 18K	C6041 B C 12O		R34 B C 11J	R2084 B C 18J	R3103 B C 11E			
C91 B C 13J	C2064 A D 18K	C6042 B C 12O		R35 B C 11J	R2085 B C 18J	R3104 B C 11E			
C92 B C 13J	C2065 A D 18K	C6043 B C 12O		R36 B C 11J	R2086 B C 18J	R3105 B C 11E			
C93 B C 13J	C2066 A D 18K	C6044 B C 12O		R37 B C 11J	R2087 B C 18J	R3106 B C 11E			
C94 B C 13J	C2067 A D 18K	C6045 B C 12O		R38 B C 11J	R2088 B C 18J	R3107 B C 11E			
C95 B C 13J	C2068 A D 18K	C6046 B C 12O		R39 B C 11J	R2089 B C 18J	R3108 B C 11E			
C96 B C 13J	C2069 A D 18K	C6047 B C 12O		R40 B C 11J	R2090 B C 18J	R3109 B C 11E			
C97 B C 13J	C2070 A D 18K	C6048 B C 12O		R41 B C 11J	R2091 B C 18J	R3110 B C 11E			
C98 B C 13J	C2071 A D 18K	C6049 B C 12O		R42 B C 11J	R2092 B C 18J	R3111 B C 11E			
C99 B C 13J	C2072 A D 18K	C6050 B C 12O		R43 B C 11J	R2093 B C 18J	R3112 B C 11E			
C100 B C 13J	C2073 A D 18K	C6051 B C 12O		R44 B C 11J	R2094 B C 18J	R3113 B C 11E			
C101 B C 13J	C2074 A D 18K	C6052 B C 12O		R45 B C 11J	R2095 B C 18J	R3114 B C 11E			
C102 B C 13J	C2075 A D 18K	C6053 B C 12O		R46 B C 11J	R2096 B C 18J	R3115 B C 11E			
C103 B C 13J	C2076 A D 18K	C6054 B C 12O		R47 B C 11J	R2097 B C 18J	R3116 B C 11E			
C104 B C 13J	C2077 A D 18K	C6055 B C 12O		R48 B C 11J	R2098 B C 18J	R3117 B C 11E			
C105 B C 13J	C2078 A D 18K	C6056 B C 12O		R49 B C 11J	R2099 B C 18J	R3118 B C 11E			
C106 B C 13J	C2079 A D 18K	C6057 B C 12O		R50 B C 11J	R2100 B C 18J	R3119 B C 11E			
C107 B C 13J	C2080 A D 18K	C6058 B C 12O		R51 B C 11J	R2101 B C 18J	R3120 B C 11E			
C108 B C 13J	C2081 A D 18K	C6059 B C 12O		R52 B C 11J	R2102 B C 18J	R3121 B C 11E			
C109 B C 13J	C2082 A D 18K	C6060 B C 12O		R53 B C 11J	R2103 B C 18J	R3122 B C 11E			
C110 B C 13J	C2083 A D 18K	C6061 B C 12O		R54 B C 11J	R2104 B C 18J	R3123 B C 11E			
C111 B C 13J	C2084 A D 18K	C6062 B C 12O		R55 B C 11J	R2105 B C 18J	R3124 B C 11E			
C112 B C 13J	C2085 A D 18K	C6063 B C 12O		R56 B C 11J	R2106 B C 18J	R3125 B C 11E			
C113 B C 13J	C2086 A D 18K	C6064 B C 12O		R57 B C 11J	R2107 B C 18J	R3126 B C 11E			
C114 B C 13J	C2087 A D 18K	C6065 B C 12O		R58 B C 11J	R2108 B C 18J	R3127 B C 11E			
C115 B C 13J	C2088 A D 18K	C6066 B C 12O		R59 B C 11J	R2109 B C 18J	R3128 B C 11E			
C116 B C 13J	C2089 A D 18K	C6067 B C 12O		R60 B C 11J	R2110 B C 18J	R3129 B C 11E			
C117 B C 13J	C2090 A D 18K	C6068 B C 12O		R61 B C 11J	R2111 B C 18J	R3130 B C 11E			
C118 B C 13J	C2091 A D 18K	C6069 B C 12O		R62 B C 11J	R2112 B C 18J	R3131 B C 11E			
C119 B C 13J									

DANGEROUS VOLTAGE

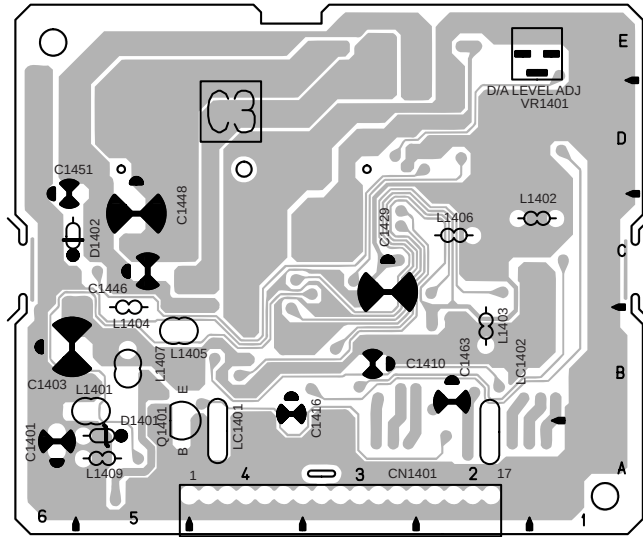
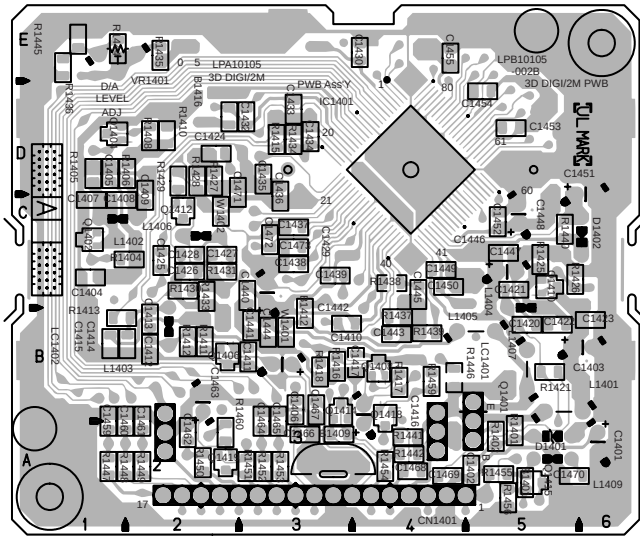
4.18 3D DIGITAL/2M CIRCUIT BOARD

[FOR HR-S8960AG]

- FOIL SIDE (B) -

<05> 3D DIGITAL/2M
LPB10105-002B

- COMPONENT SIDE (A) -

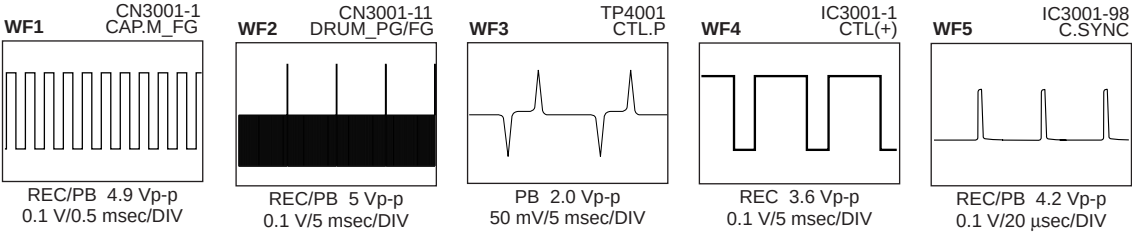


COMPONENT PARTS LOCATION GUIDE <3D DIGITAL/2M> LPB10105-002B

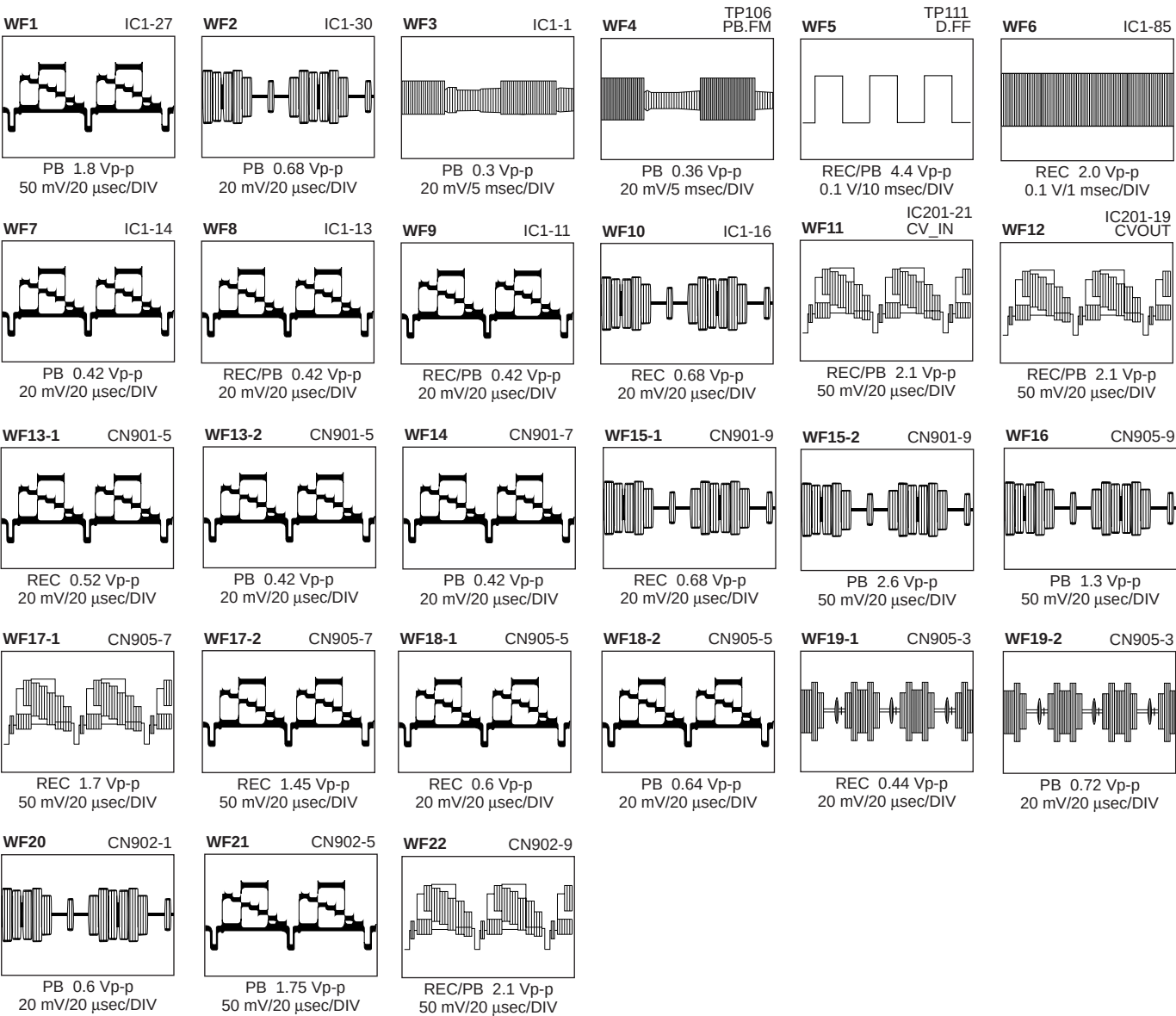
REF.NO. LOCATION			REF.NO. LOCATION			REF.NO. LOCATION			REF.NO. LOCATION			REF.NO. LOCATION			REF.NO. LOCATION			REF.NO. LOCATION			REF.NO. LOCATION		
CAPACITOR			C1417	B C 4B	C1437	B C 3C	C1454	B C 5D	CONNECTOR			L1407	A D 5B	RESISTOR			R1426	B C 6C	R1445	B C 1E			
C1401	A D 6A	C1420	B C 5B	C1438	B C 3C	C1455	B C 4E	CN1401	A D 5A	L1409	A D 5A	R1401	B C 5A	R1427	B C 2D	R1446	B C 4B						
C1402	B C 5A	C1421	B C 5C	C1439	B C 3C	C1459	B C 1B			LC1401	A D 4A	R1402	B C 5A	R1428	B C 2D	R1447	B C 1A						
C1403	A D 6B	C1422	B C 5B	C1440	B C 3C	C1460	B C 2B	DIODE			LC1402	A D 2A	R1404	B C 2C	R1429	B C 2D	R1448	B C 2A					
C1404	B C 1C	C1423	B C 6B	C1441	B C 3B	C1461	B C 2B	D1401	A D 6A			R1405	B C 1D	R1430	B C 2C	R1449	B C 2A						
C1405	B C 1D	C1424	B C 2D	C1442	B C 4B	C1462	B C 2A	D1402	A D 6C	TRANSISTOR			R1406	B C 2D	R1431	B C 2C	R1450	B C 2A					
C1406	B C 3B	C1425	B C 2C	C1443	B C 4B	C1463	A D 2B			Q1401	A D 5B	R1408	B C 2D	R1433	B C 2C	R1451	B C 3A						
C1407	B C 1C	C1426	B C 2C	C1444	B C 3B	C1464	B C 2B	IC			Q1402	B C 1C	R1410	B C 2D	R1434	B C 3D	R1452	B C 3A					
C1408	B C 2C	C1427	B C 2C	C1445	B C 4C	C1465	B C 3B	IC1401	B C 4D	Q1404	B C 1D	R1411	B C 2B	R1435	B C 2E	R1453	B C 3A						
C1409	B C 2C	C1428	B C 2C	C1446	A D 5C	C1466	B C 3A			Q1406	B C 2B	R1412	B C 2B	R1436	B C 1E	R1454	B C 4A						
C1410	A D 3B	C1429	A D 3C	C1447	B C 5C	C1467	B C 3B	COIL			Q1408	B C 4B	R1413	B C 2B	R1437	B C 4B	R1455	B C 5A					
C1411	B C 3B	C1430	B C 4E	C1448	A D 5C	C1468	B C 4A	L1401	A D 5B	Q1410	B C 5C	R1415	B C 3D	R1438	B C 4C	R1456	B C 5A						
C1412	B C 2B	C1432	B C 3D	C1449	B C 4C	C1469	B C 4A	L1402	A D 2C	Q1412	B C 2C	R1416	B C 3B	R1439	B C 4B	R1457	B C 4B						
C1413	B C 2B	C1433	B C 3D	C1450	B C 4C	C1470	B C 6A	L1403	A D 2B	Q1414	B C 3B	R1417	B C 4B	R1440	B C 5C	R1458	B C 2A						
C1414	B C 2B	C1434	B C 3D	C1451	A D 6D	C1471	B C 3D	L1404	A D 5C	Q1415	B C 5A	R1418	B C 3B	R1441	B C 4A								
C1415	B C 1B	C1435	B C 3D	C1452	B C 5C	C1472	B C 3C	L1405	A D 4B	Q1418	B C 4B	R1421	B C 5B	R1442	B C 4A	OTHER							
C1416	A D 4A	C1436	B C 3C	C1453	B C 5D	C1473	B C 3C	L1406	A D 2C	Q1419	B C 2A	R1425	B C 5C	R1444	B C 2E	VR1401	A D 2E						

4.20 WAVEFORMS

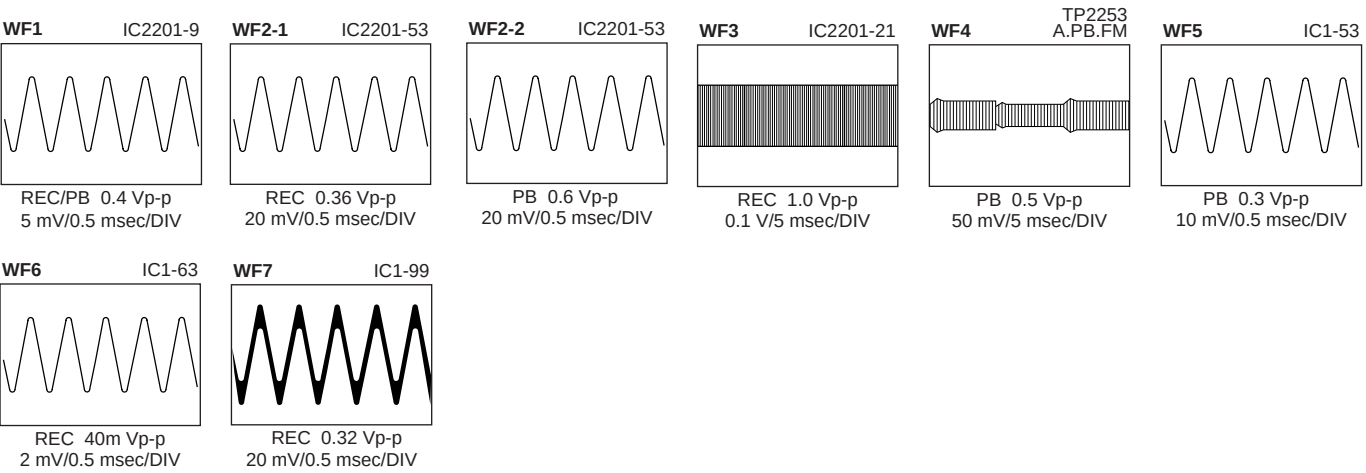
< SYSCON >



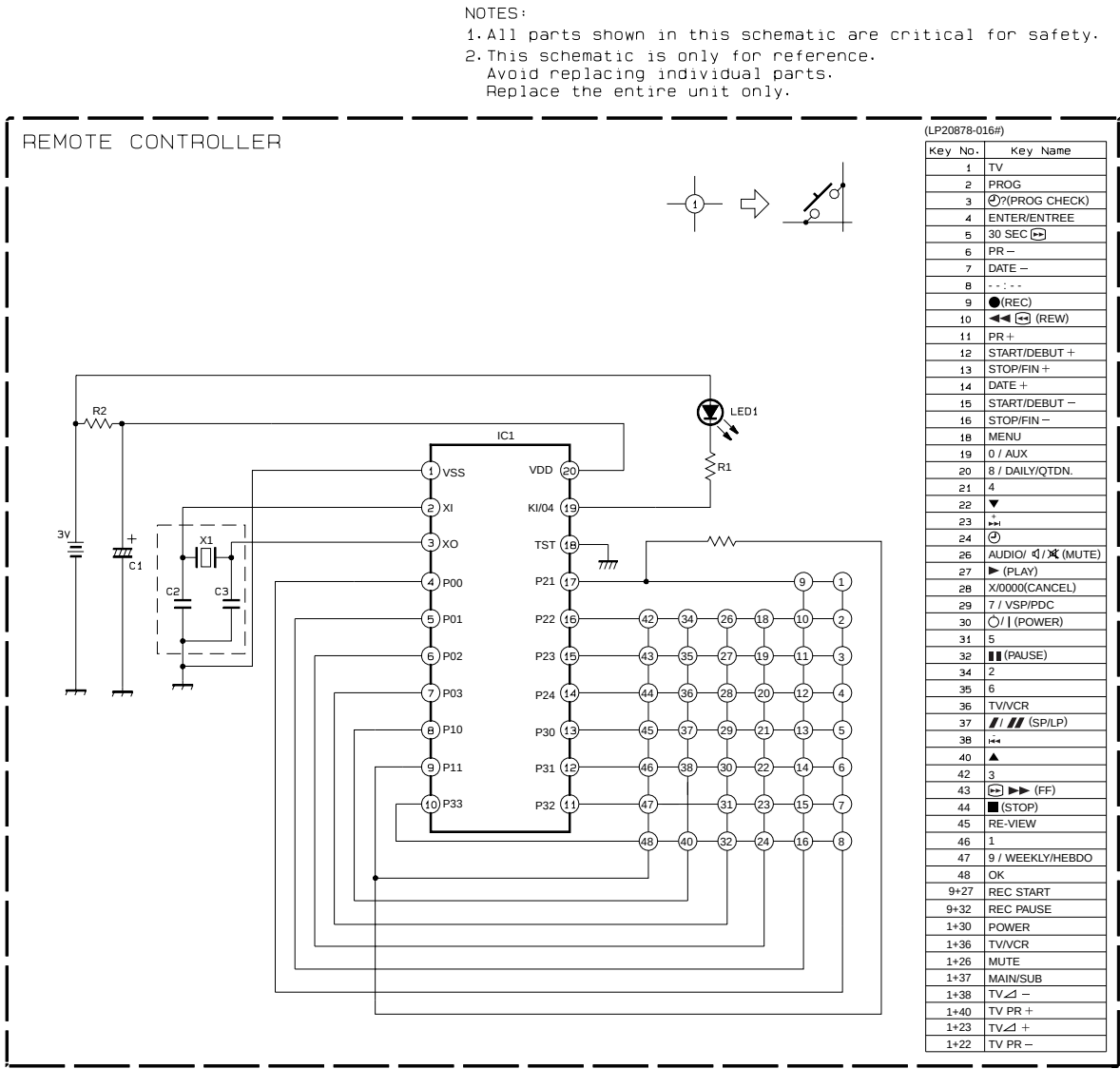
< VIDEO >



< AUDIO >

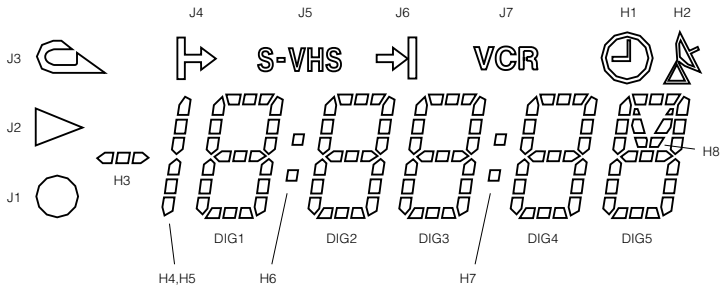


4.21 REMOTE CONTROLLER SCHEMATIC DIAGRAM



4.22 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



ANODE CONNECTION

No.	CONNECTION
1	CATHODE G, J7, H8
2	CATHODE F, J6, H7
3	CATHODE E, J5, H6
4	CATHODE D, J4, H4, H5
5	CATHODE C, J3, H3
6	CATHODE B, J2, H2
7	CATHODE A, J1, H1
8	COMMON ANODE H1-H8
9	COMMON ANODE J1-J7
10	COMMON ANODE (DIGIT 5)
11	COMMON ANODE (DIGIT 4)
12	COMMON ANODE (DIGIT 3)
13	COMMON ANODE (DIGIT 2)
14	COMMON ANODE (DIGIT 1)

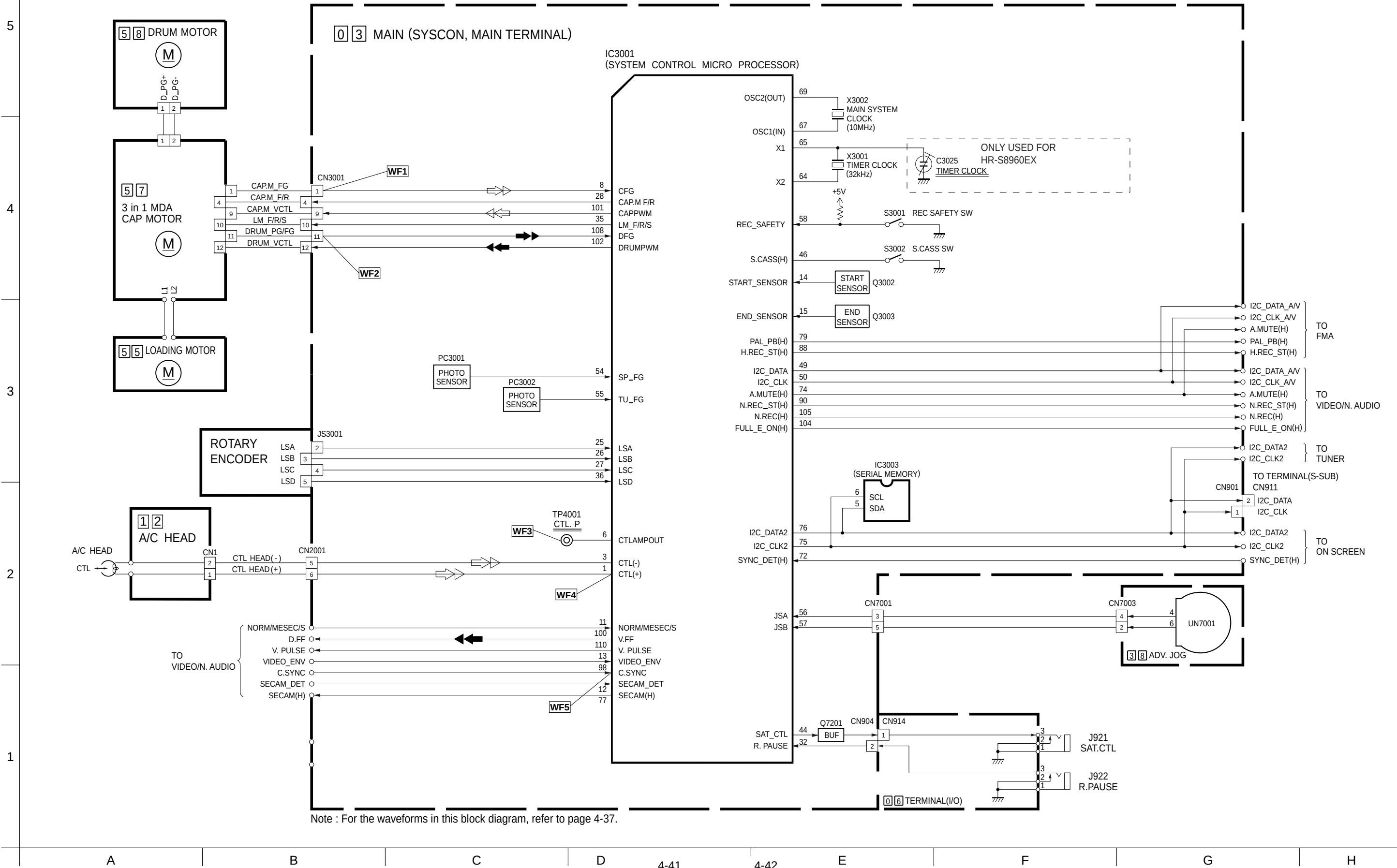
4.23 CPU PIN FUNCTION

<SYSCON IC3001>

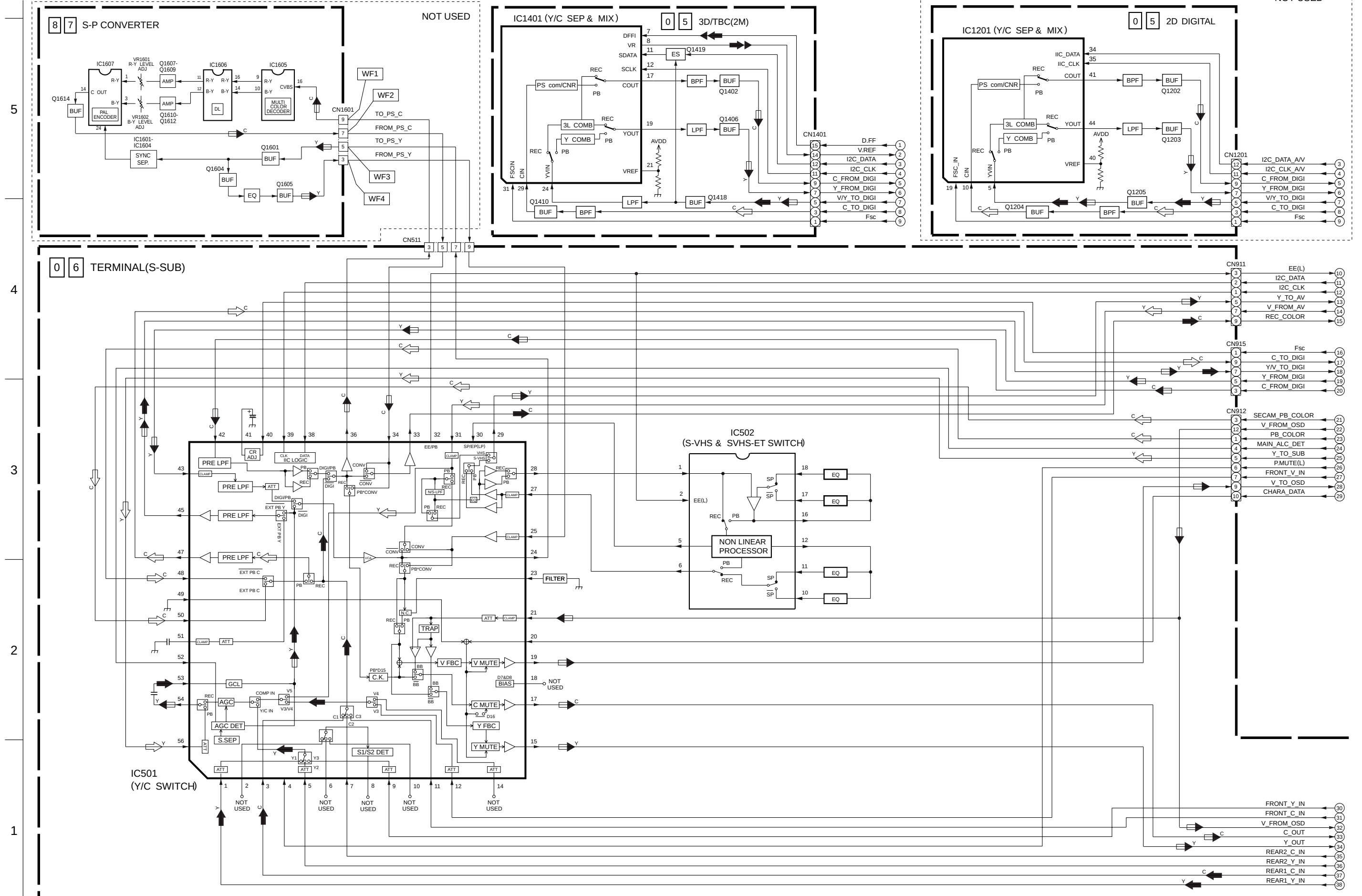
PIN NO.	LABEL	IN/OUT	FUNCTION
1	CTL(+)	IN/OUT	CTL(+) SIGNAL
2	SVSS	-	GND
3	CTL(-)	IN/OUT	CTL(-) SIGNAL
4	CTLBIAS	-	CTL BIAS VOLTAGE
5	CTLFb	IN	CTL PULSE FEEDBACK
6	CTLAMP OUT	OUT	CTL PULSE OUTPUT
7	CTLSMTIN	IN	CTL PULSE INPUT
8	CFG	IN	CAPSTAN FG PULSE INPUT
9	SVCC	-	SYSTEM POWER
10	AVCC	-	SYSTEM POWER FOR ANALOG CIRCUIT
11	NORM/MESEC/S	IN	(NORM MODE: L/MESECAM MODE: M/SVHS MODE:H)
12	SECAM_DET	IN	SECAM COLOR DETECT (SECAM:H)
13	VIDEO_ENV	IN	AUTO TRACKING DETECT/INPUT THE AVERAGE OF PLAYBACK VIDEO SIGNAL
14	START_SENSOR	IN	START SENSOR
15	END_SENSOR	IN	END SENSOR
16	KEY1	IN	OPERATION CONTROL SIGNAL
17	PROTECT	IN	DETECTION SIGNAL FOR SW POWER SUPPLY
18	SCR_ID/	IN	SCRAMBLE CONTROL INPUT (SCRAMBLE:H)
19	KEY2	IN	OPERATION CONTROL SIGNAL
20	AFC	IN	TUNING CHECK
21	RF AGC	IN	CHANGES IN AT&H-C OUTPUT AS CAUSED BY CHANGES IN RECEIVER SENSITIVITY WHEN THE SAME CHANNEL IS RECEIVED MORE THAN ONCE ARE INPUT.
22	A.ENV/IND(L)	IN	AUDIO PB FM ENV.INPUT/NON HIFI MODE:L
23	AVSS	-	GND FOR ANALOG CIRCUIT
24	CTL_GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
25	LSA	IN	MECHANISM MODE DETECT(A)
26	LSB	IN	MECHANISM MODE DETECT(B)
27	LSC	IN	MECHANISM MODE DETECT(C)
28	CAP.M F/R	OUT	CAPSTAN MOTOR FORWARD/REVERSE CONTROL
29	RC	IN	REMOTE CONTROL DATA INPUT
30	DIG1	OUT	LED DRIVE
31	P50_IN	IN	CONTROL SIGNAL FOR TV LINK
32	R.PAUSE	IN	REMOTE PAUSE CONTROL
33	P50_OUT	OUT	CONTROL SIGNAL FOR TV LINK
34	DIG2	OUT	LED DRIVE
35	LM_F/R/S	OUT	LOADING MOTOR DRIVE
36	LSD	OUT	MECHANISM MODE DETECT (D)
37	DIG3	OUT	LED DRIVE
38	SB_GAIN(PWM)	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
39	DIG4	OUT	LED DRIVE
40	POWER_DET	IN	DETECTION SIGNAL FOR POWER DOWN OF AC POWER SUPPLY
41	PCTL(H)	OUT	CONTROL SIGNAL FOR SWITCHING POWER SUPPLY
42	DIG5	OUT	LED DRIVE
43	VSS	-	GND
44	SAT_CTL	OUT	CONTROL SIGNAL FOR SATELLITE RECEIVER
45	VCC	-	SYSTEM POWER
46	S.CASS(H)	IN	DETECTION SIGNAL FOR SVHS CASSETTE (SVHS:H)
47	OSD_CS	OUT	CHIP SELECT FOR THE ON-SCREEN IC
48	MESECAM(H)/AGC_CTL	OUT	MESECAM: H/AGC CONTROL INPUT
49	I2C_DATA	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR THE VIDEO/AUDIO IC
50	I2C_CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR THE VIDEO/AUDIO IC
51	DIG6	OUT	LED DRIVE
52	S.DATA_FRSYS	OUT	SERIAL DATA TRANSFER OUTPUT FROM THE FDP DRIVER TO THE ON-SCREEN IC
53	S.CLK	OUT	SERIAL DATA TRANSMISSION CLOCK FROM THE FDP DRIVER TO THE ON-SCREEN IC
54	SP_FG	IN	DETECTION SIGNAL FOR SUPPLY REEL ROTATION/TAPE REMAIN
55	TU_FG	IN	DETECTION SIGNAL FOR TAKE-UP REEL ROTATION/TAPE REMAIN
56	JSA	IN	INPUT FOR THE JOG SHUTTLE

PIN NO.	LABEL	IN/OUT	FUNCTION
57	JSB	IN	INPUT FOR THE JOG SHUTTLE
58	REC_SAFETY	IN	REC SAFETY SWITCH DETECT (SW ON:L)
59	SW1	OUT	TUNER SYSTEM MODE:H
60	SW2	OUT	TUNER SYSTEM MODE:L
61	DIG7	OUT	LED DRIVE
62	FWE	OUT	FLASH WRITE ENABLE
63	NMI(L)	-	CONNECT TO GND
64	X2	-	TIMER CLOCK (32.768KHz)
65	X1	-	TIMER CLOCK (32.768KHz)
66	RES	-	RESET TERMINAL (RESET ON:L)
67	OSC1(IN)	-	MAIN SYSTEM CLOCK(10MHz)
68	VSS	-	GND
69	OSC2(OUT)	-	MAIN SYSTEM CLOCK(10MHz)
70	VCC/VCL	-	SYSTEM POWER
71	MODE	IN	FWE MODE
72	SYNC_DET(H)	IN	DETECTION OF VIDEO SYNC SIGNAL(DETECTED:H)
73	TU_V_MUTE(H)	OUT	TUNER VIDEO CONTROL (MUTE:H)
74	A.MUTE(H)	OUT	AUDIO MUTE CONTROL (MUTE:H)
75	I2C_CLK2	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC
76	I2C_DATA2	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
77	SECAM(H)	OUT	SECAM MODE:H
78	P.ON_PULSE	OUT	P.ON_PULSE(H)
79	PAL_PB(H)	OUT	PAL FM(PB ON:H)
80	V.PCTL	OUT	V.PULSE CONTROL, V COMPENSATION DURING SPECIAL PLAYBACK
81	VHS(H)	OUT	VHS MODE(H)
82	VCC	-	SYSTEM POWER
83	SLOW_P	OUT	MEMORY TIMING CONTROL IN THE SLOW MODE
84	VSS	-	GND
85	SP_SHORT(H)/FLY.ON(H)	OUT	MODE SELECT/FLYING ERASE ON:H
86	LP_SHORT(H)/FLY.REC(H)	OUT	MODE SELECT/FLY REC START:H
87	SEP(H)	OUT	SEP PB:H
88	H.REC_ST(H)	OUT	HIFI AUDIO SOUND RECORDING START
89	TRICK(H)	OUT	SPECIAL PLAYBACK:H
90	N.REC_ST(H)	OUT	NORMAL AUDIO SOUND RECORDING START
91	Da	OUT	LED DRIVE
92	Db	OUT	LED DRIVE
93	Dc	OUT	LED DRIVE
94	Dd	OUT	LED DRIVE
95	De	OUT	LED DRIVE
96	Df	OUT	LED DRIVE
97	Dg	OUT	LED DRIVE
98	C.SYNC	IN	COMPOSITE SYNC
99	A.FF	OUT	AUDIO FF OUTPUT
100	V.FF	IN	ROTATION DETECTION SIGNAL FOR DRUM MOTOR/TIMING CONTROL SIGNAL FOR REC
101	CAPPWM	OUT	CAPSTAN MOTOR CONTROL
102	DRUMPWM	OUT	DRUM MOTOR CONTROL
103	P.MUTE(L)	OUT	PICTURE MUTE CONTROL(MUTE:L)
104	FULL_E_ON(H)	OUT	FULL ERASE ON:H
105	N.REC(H)	OUT	NORMAL AUDIO REC MODE CONTROL SIGNAL (REC:H)
106	ET_REC(H)	OUT	ET REC MODE:H
107	HI_S_FF_REW	OUT	HIGH SPEED FF/REW CONTROL
108	DFG	IN	DRUM FG PULSE INPUT
109	VCC	-	SYSTEM POWER
110	V.PULSE	OUT	V.PULSE ADDITION TIMING CONTROL
111	VSS	-	GND
112	CTLREF	-	CTL REFERENCE VOLTAGE

4.24 SYSTEM CONTROL BLOCK DIAGRAM



4.25 VIDEO BLOCK DIAGRAM



A

B

C

D

4-43

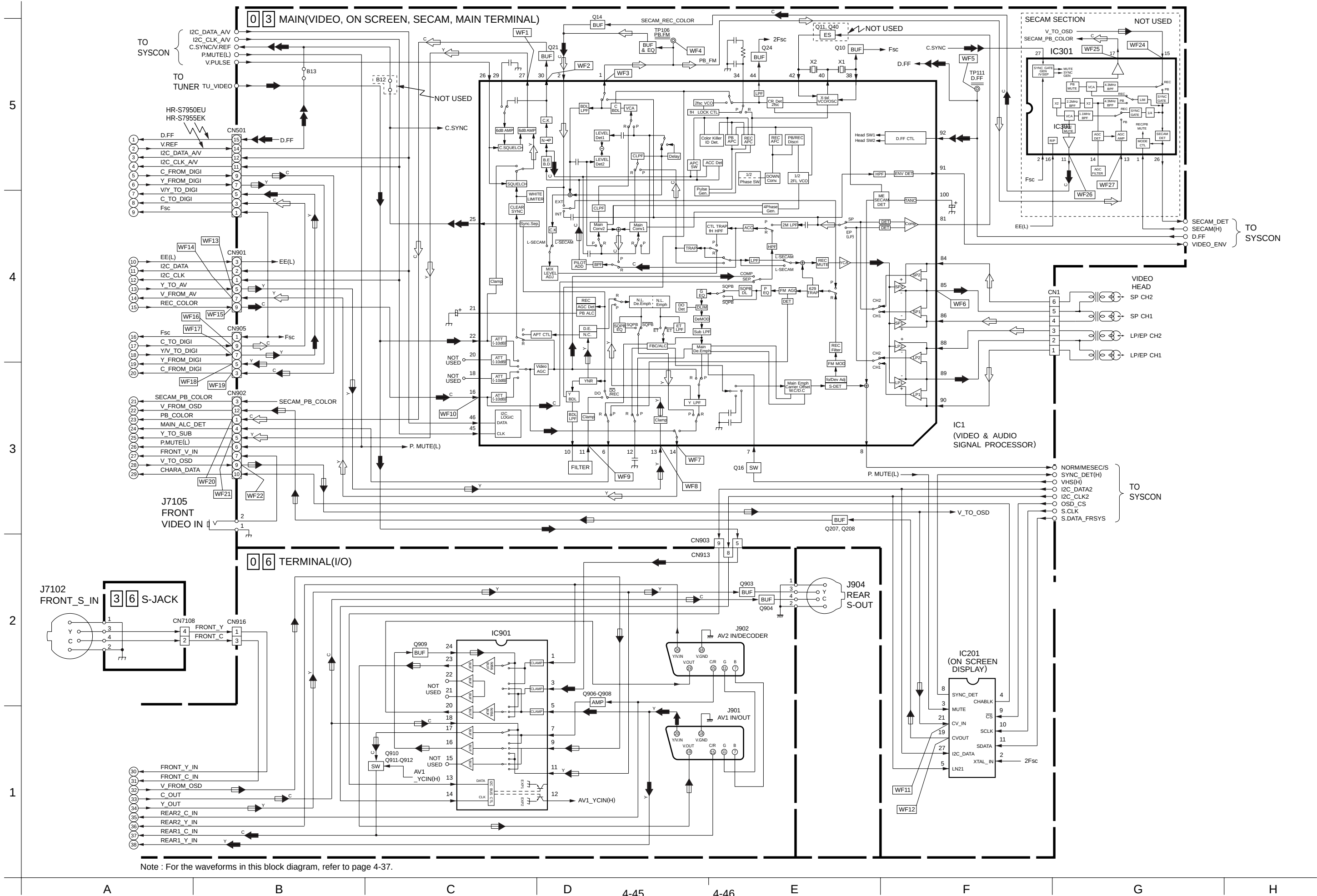
4-44

E

F

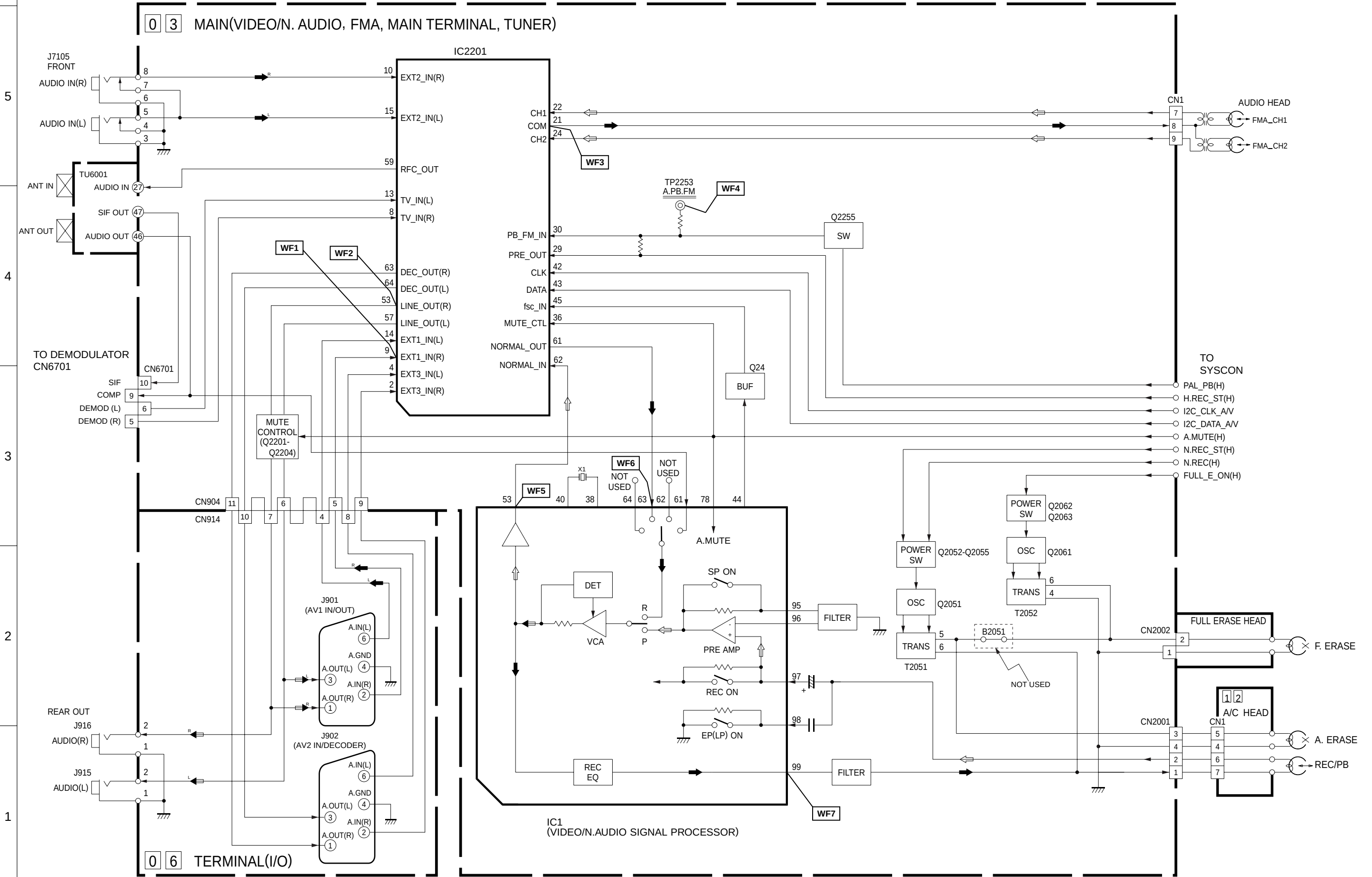
G

H



Note : For the waveforms in this block diagram, refer to page 4-37.

4.26 AUDIO BLOCK DIAGRAM



Note : For the waveforms in this block diagram, refer to page 4-38.

SECTION 5 PARTS LIST

5.1 EXPLODED VIEW

SAFETY PRECAUTION

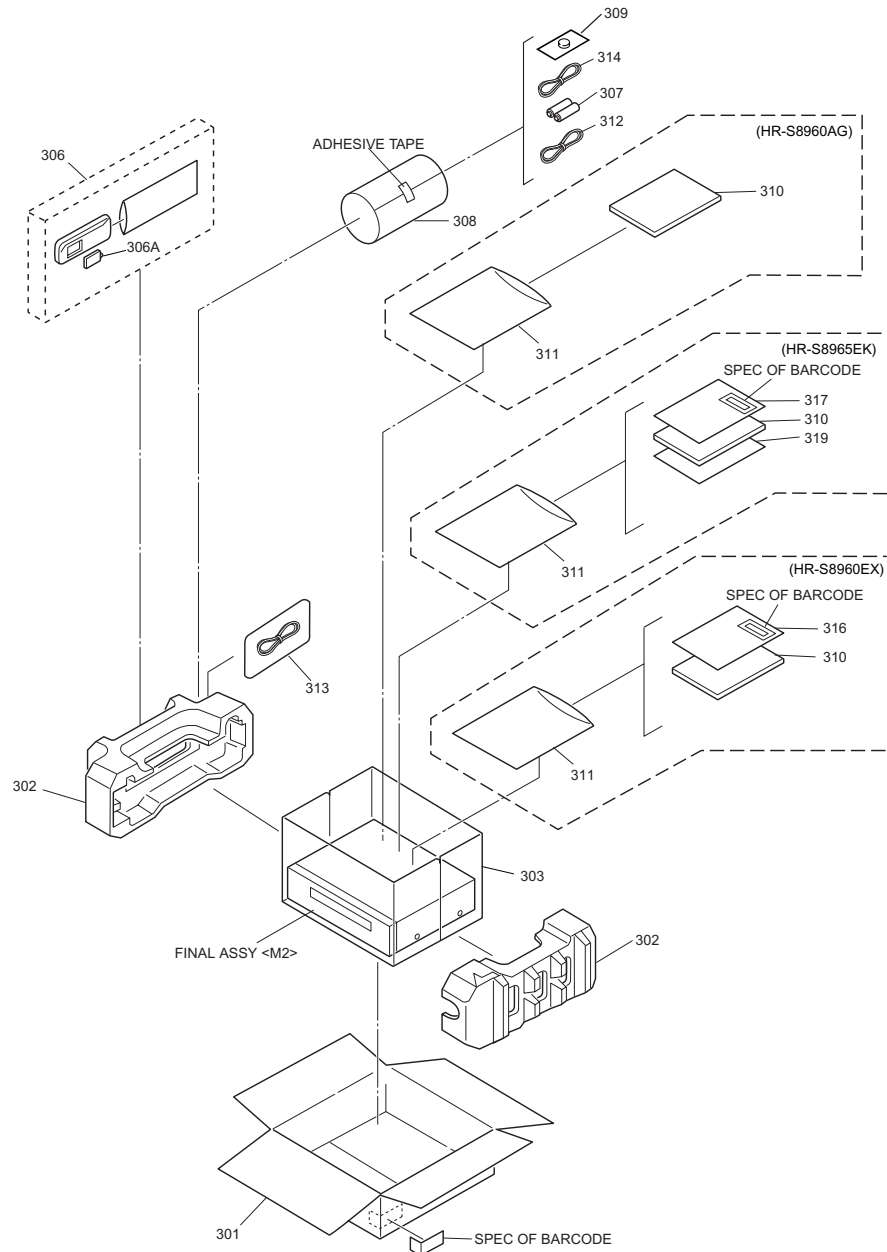
Parts identified by the  symbol are critical for safety. Replace only with specified part numbers.

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

5.1.1 PACKING AND ACCESSORY ASSEMBLY <M1>

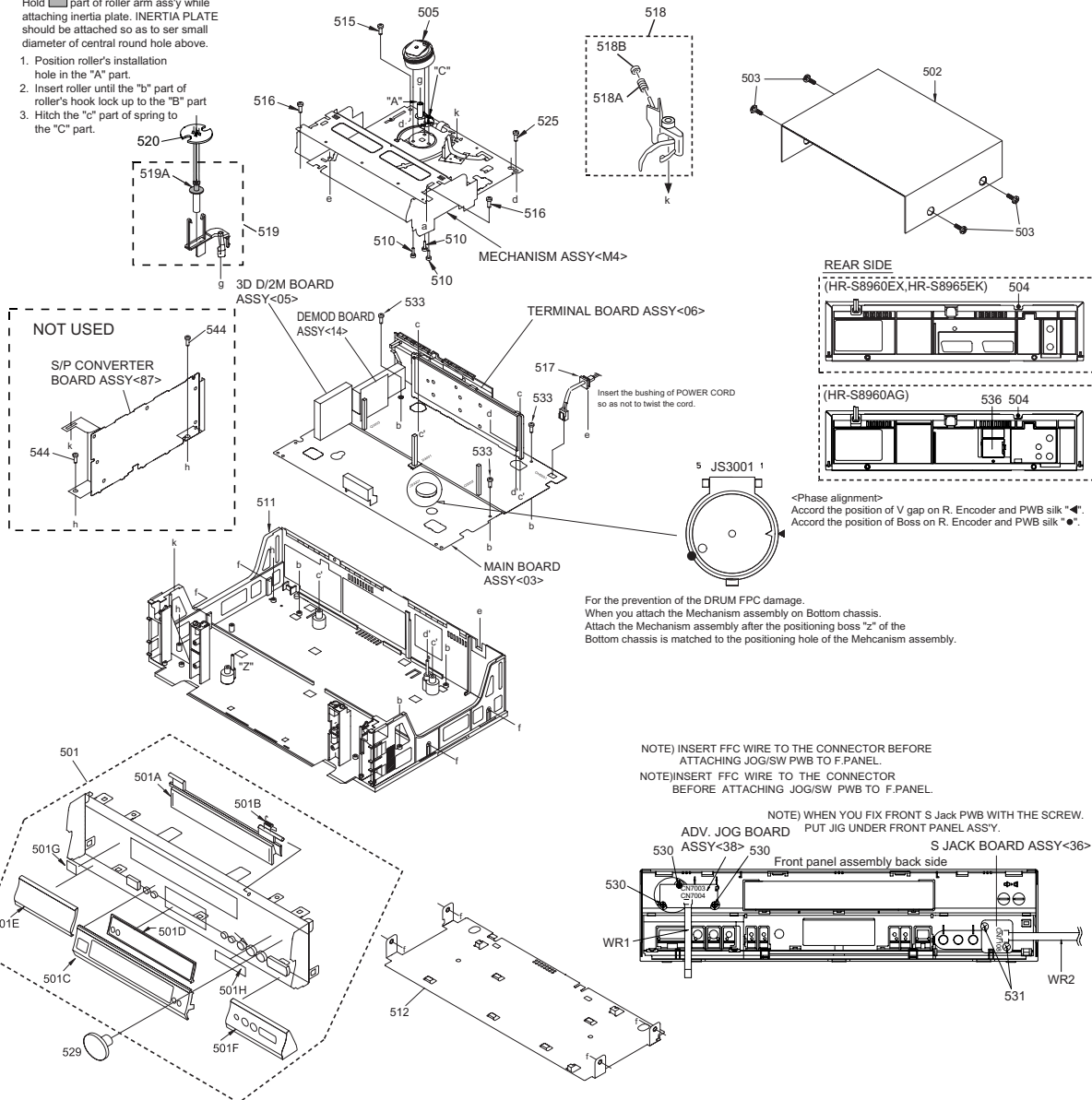
The instruction manual to be provided with this product will differ according to the destination.



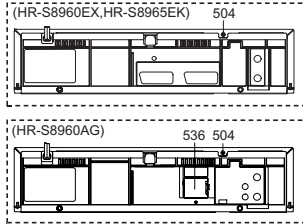
5.1.2 FINAL ASSEMBLY <M2>

Hold  part of roller arm ass'y while attaching inertia plate. INERTIA PLATE should be attached so as to ser small diameter of central round hole above.

1. Position roller's installation hole in the "A" part.
2. Insert roller until the "b" part of roller's hook lock up to the "B" part
3. Hitch the "c" part of spring to the "C" part.



REAR SIDE



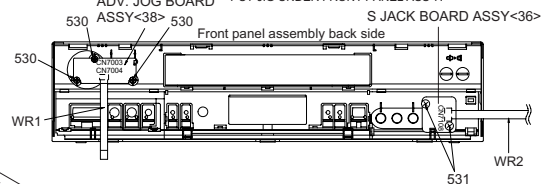
<Phase alignment>
Accord the position of V gap on R. Encoder and PWB silk "▲".
Accord the position of Boss on R. Encoder and PWB silk "●".

For the prevention of the DRUM FPC damage.
When you attach the Mechanism assembly on Bottom chassis.
Attach the Mechanism assembly after the positioning boss "z" of the Bottom chassis is matched to the positioning hole of the Mechanism assembly.

NOTE) INSERT FFC WIRE TO THE CONNECTOR BEFORE ATTACHING JOG/SW PWB TO F.PANEL.

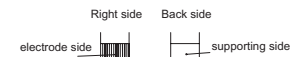
NOTE) INSERT FFC WIRE TO THE CONNECTOR BEFORE ATTACHING JOG/SW PWB TO F.PANEL.

NOTE) WHEN YOU FIX FRONT S Jack PWB WITH THE SCREW. PUT JIG UNDER FRONT PANEL ASSY.

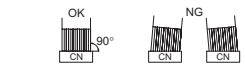


NOTE

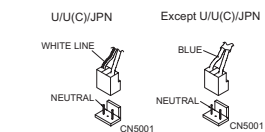
1. Insert direction of FFC WIRE as follows.



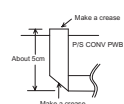
2. FFC WIRE and DRUM FPC WIRE should be insert as follows.



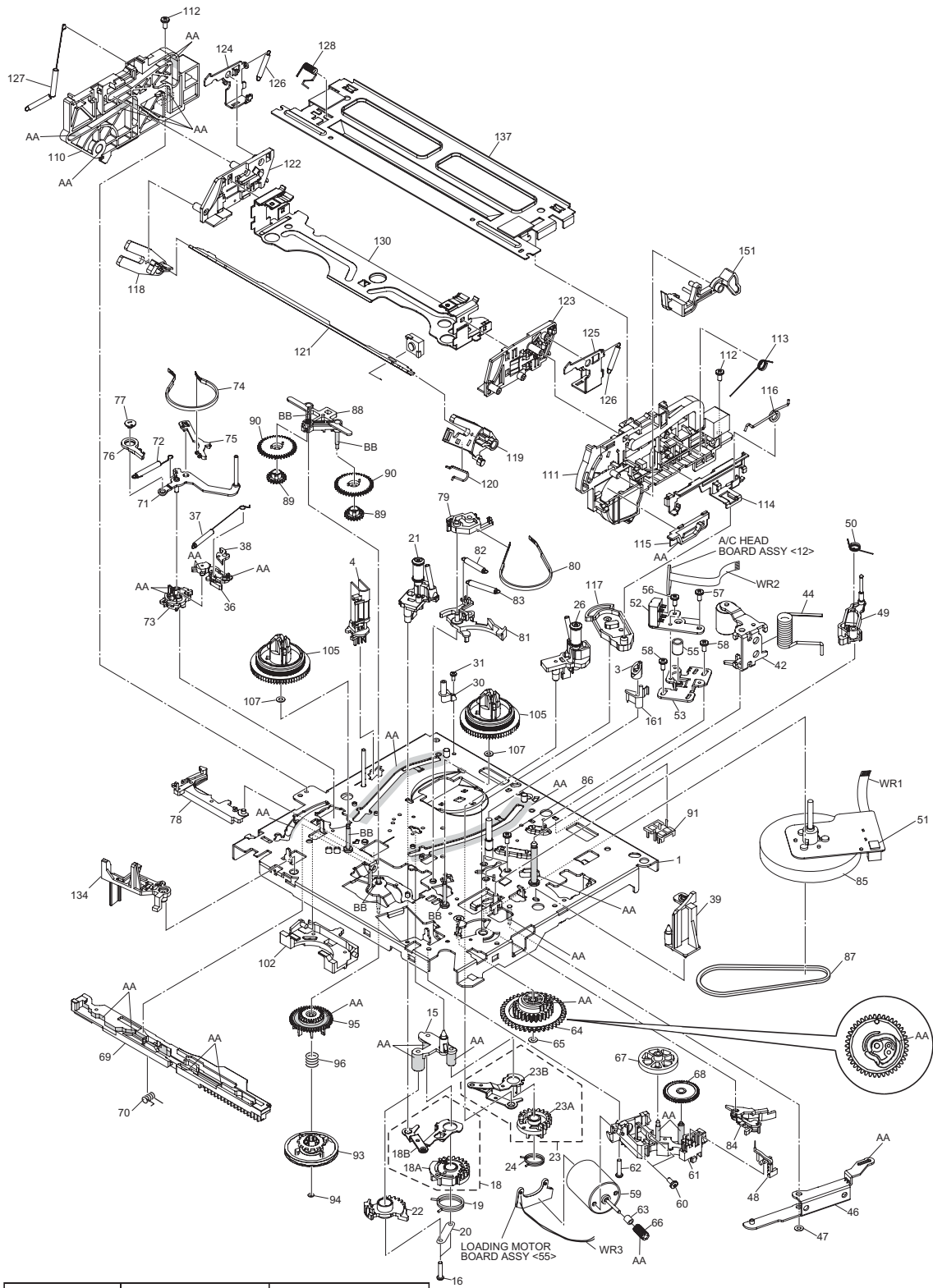
3. Insert direction of POWER CORD.



DETAIL "A"



5.1.3 MECHANISM ASSEMBLY <M4>



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	COSMO-HV56	BB

NOTE:The section marked in **AA** and **BB** indicate lubrication and greasing areas.

5.2 PARTS LIST

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

REF No. PART No. PART NAME, DESCRIPTION ABC

PACKING AND ACCESSORY ASSEMBLY <M1>

301	LP30855-004B	PACKING CASE	AB
301	LP31255-003A	PACKING CASE	C
302	LP31187-001A	CUSHION ASSY	AB
302	LP31247-001A	CUSHION ASSY	C
303	PQM30021-093	POLY BAG	AB
303	LP41038-002A	POLY BAG	C
306	LP20878-016A	REMOTE CTL UNIT	AB
306	LP20878-019B	REMOTE CTL UNIT	C
306A	LP40610-003A	COVER(BATTERY)	ABC
307	—	BATTERY,X2	ABC
308	QPC02202230P	POLY BAG,CABLE	ABC
△ 309	PECA0903	LI BATTERY	C
△ 310	LPT0754-001A	INST.BOOK(ENGLISH),FOR EX	A
△ 310	LPT0754-002A	INST.BOOK(GERMANY),FOR EX&EY	A
△ 310	LPT0754-003A	INST.BOOK(FRENCH),FOR EX	A
△ 310	LPT0754-004A	INST.BOOK(DUTCH),FOR EX	A
△ 310	LPT0754-005A	INST.BOOK(SPANISH),FOR EX	A
△ 310	LPT0754-006A	INST.BOOK(ITALIAN),FOR EX	A
△ 310	LPT0754-007A	INST.BOOK(DANISH),FOR EY	A
△ 310	LPT0754-008A	INST.BOOK(FINN),FOR EY	A
△ 310	LPT0754-009A	INST.BOOK(SWEDISH),FOR EY	A
△ 310	LPT0754-010A	INST.BOOK(NORWEGIAN),FOR EY	A
△ 310	LPT0754-011A	INST.BOOK(PORTUGUESE),FOR EX	A
△ 310	LPT0754-012A	INST.BOOK(GREEK),FOR EX	A
△ 310	LPT0754-013A	INST.BOOK(CZECH),FOR EZ	A
△ 310	LPT0754-014A	INST.BOOK(POLISH),FOR EZ	A
△ 310	LPT0754-015A	INST.BOOK(HUNGARIAN),FOR EZ	A
△ 310	LPT0771-001A	INST.BOOK(ENGLISH)	B
△ 310	LPT0798-001A	INST.BOOK(ENGLISH)	C
△ 310	LPT0798-002A	INST.BOOK(CHINESE)	C
311	QPC02503530P	POLY BAG,INST	ABC
312	PEAC0300-02	RF CABLE	AB
312	PEAC0348-02	RF CABLE	C
313	QAL0095-005	LED CABLE ASSY	AB
314	QAM0004-002	S CABLE,ACC.SA	C
316	BT-54013-5	WARRANTY CARD	A
317	BT-54008-4	GUARANTY CARD	B
319	LYT0194-001B	Q.CARD(JUK)	B

FINAL ASSEMBLY <M2>

△ 501	LP10452-013D	FRONT PANEL ASSY	A
△ 501	LP10452-028C	FRONT PANEL ASSY	B
△ 501	LP10452-037A	FRONT PANEL ASSY	C
501A	LP21123-008B	CASSETTE DOOR	AB
501A	LP21123-016A	CASSETTE DOOR	C
501B	PQ46448	TORSION SPRING	ABC
501C	LP21127-007B	COVER(WINDOW)	AB
501C	LP21127-012A	COVER(WINDOW)	C
501D	LP31188-005A	WINDOW(1)	A
501D	LP31188-017A	WINDOW(1),S89865EK	B
501D	LP31188-019A	WINDOW(1)	C
501E	LP31142-010B	DOOR(JACK)	A
501E	LP31142-014B	DOOR(JACK)	B
501E	LP31142-021A	DOOR(JACK)	C

REF No. PART No. PART NAME, DESCRIPTION ABC

501F	LP30877-006A	COVER(R)	ABC
501G	LP41035-001A	STICKER	AB
501G	LP41064-004A	STICKER	C
501H	LP41035-005A	STICKER	AB
△ 502	LP10013-051C	TOP COVER	AB
△ 502	LP10013-045C	TOP COVER	C
503	QYTDSF3010R	TAP SCREW,X4,SIDE	ABC
504	QYTDSF3010M	TAP SCREW,REAR	ABC
505	PDV2547A	DRUM FINAL ASSY	ABC
510	QYSPSPD3008Z	SCREW,X3,DRUM	ABC
△ 511	LP10108-016H	BOTTOM CHASSIS	ABC
△ 512	LP10014-002C	BOTTOM COVER	AB
515	QYTDSF4012Z	TAP SCREW,FOR MECHA	ABC
516	QYSPSFG3010Z	TAP SCREW,X2,FOR MECHA	ABC
△ 517	QMP4A10-170	POWER CORD	A C
△ 517	QMP51K0-170-K	POWER CORD	B
518	LP40910-002G	H. CLEANER ASSY	C
518A	PQ46418-2	CLEANER ROLLER	C
518B	PQ46419-2	CLEANER	C
519	LP40370-001F	ROLLER ARM ASSY	ABC
519A	PDM4311A-1	ROLLER ASSY	ABC
520	PQ45160	INERTIA PLATE	ABC
525	LP40700-001A	SPECIAL SCREW,FOR MECHA	AB
525	QYTDSF4012Z	TAP SCREW,FOR MECHA	C
529	LP30875-002B	KNOB(ADV.JOG)	AB
529	LP30875-001A	KNOB(ADV.JOG)	C
530	QYTSPFG2608Z	TAP SCREW,X3,FOR ADV.JOG	ABC
531	QYTDSF2608Z	TAP SCREW,X2,FOR S JACK	ABC
533	DPSF3010Z	SCREW,X3,MAIN	AB
536	LP30336-001A	CAP	C
WR1	QUQ212-0414CG	FFC WIRE,ADV.JOG(FSA)	ABC
WR2	QUQ212-0456CG	FFC WIRE,S JACK(FSA)	ABC

MECHANISM ASSEMBLY <M4>

1	LP21039-001U	MAIN DECK ASSY	ABC
3	LP40097-002E	GUIDE POLE CAP	ABC
4	QAH0082-001	FULL ERASE HEAD	ABC
15	LP30958-001B	LOAD.GEAR BASE	ABC
16	QYTST2620Z	TAP SCREW,X2,L.G.BASE	ABC
18	LP40798-001A	LOAD.GEAR(SUPPLY) ASSY	ABC
18A	LP21040-001A	LOAD.GEAR(SUPPLY)	ABC
18B	LP40799-001A	LOAD.ARM(SUPPLY) ASSY	ABC
19	LP40837-001A	TORSION SPRING(S),L.GEAR(S)	ABC
20	LP40903-002B	FIXING PLATE	ABC
21	LP40806-001D	POLE BASE ASSY(SUPPLY)	ABC
22	LP30959-002B	LOAD GEAR	ABC
23	LP40802-001C	LOAD.GEAR(TAKE UP) ASSY	ABC
23A	LP21041-001D	LOAD.GEAR(TAKE UP)	ABC
23B	LP40803-001A	LOAD.ARM(TAKE UP) ASSY	ABC
24	LP40838-001A	TORSION SPRING(T),L.GEAR(T)	ABC
26	LP40808-001E	POLE BASE ASSY(TAKE UP)	ABC
30	LP31020-004B	ARM BASE	ABC
31	QYTST2606Z	TAP SCREW	ABC
36	LP21055-001F	TU LEVER	ABC
37	LP40943-001A	TENSION SPRING	ABC
38	LP40859-001D	T-UP HEAD	ABC
39	LP30961-001C	LID GUIDE	ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

# REF No.	PART No.	PART NAME, DESCRIPTION	ABC
42	LP40810-001B	PINCH ROLLER ARM ASSY	ABC
44	LP40840-001D	TORSION SPRING,P.ROLLER	ABC
46	LP30963-001B	PRESS LEVER	ABC
47	PQM30017-24	SLIT WASHER,P.LEVER	ABC
48	LP40930-002E	S-SWITCH	ABC
49	LP40813-001D	GUIDE ARM ASSY	ABC
50	LP40841-001A	TORSION SPRING,G.ARM	ABC
51	LP30002-090A	SPACER,CAPSTAN MOTOR	ABC
52	QAH0081-001	AC HEAD	ABC
53	LP30965-001A	HEAD BASE	ABC
55	LP40842-001D	COMPRESSION SPRING	ABC
56	QYTDST2006M	TAP SCREW,A/C HEAD	ABC
57	LP41036-001A	A/C ADJ.SCREW,X2,A/C HEAD	ABC
58	QYTDST2606Z	TAP SCREW,X2,A/C HEAD	ABC
59	QAR0023-001	LOADING MOTOR	ABC
60	QYTPSP3003Z	SCREW,X2,L.MOTOR	ABC
61	LP21056-002J	MOTOR BRACKET	ABC
62	QYTPST2620Z	TAP SCREW,M.BKT	ABC
63	LP40814-001B	WORM BEARING	ABC
64	LP21044-001E	CONTROL CAM	ABC
65	PQM30017-24	SLIT WASHER,CTL.CAM	ABC
66	LP40815-001A	WORM GEAR	ABC
67	LP40816-001B	HELICAL GEAR,M.BKT	ABC
68	LP40817-001A	CONNECT GEAR	ABC
69	LP10400-001J	CONTROL PLATE	ABC
70	LP40843-001A	TORSION SPRING	ABC
71	LP40818-001B	TENSION ARM ASSY	ABC
72	LP40844-001E	TENSION SPRING,T.ARM	ABC
73	LP21045-001D	TENSION ARM BASE	ABC
74	LP40821-001A	TENSION BAND ASSY	ABC
75	LP30967-001B	BAND HOLDER-1	ABC
76	LP30968-001C	BAND HOLDER-2	ABC
77	LP40822-002B	ADJUST PIN	ABC
78	LP31000-005E	TENSION ARM LEVER	ABC
79	LP21046-001C	MAIN BRAKE(TAKE UP)	ABC
80	LP40824-001A	BAND BRAKE ASSY	ABC
81	LP30969-002B	BRAKE LEVER	ABC
82	LP30003-033B	TENSION SPRING,BRK LEVER	ABC
83	LP30003-035B	TENSION SPRING,BRK LEVER	ABC
84	LP40825-001B	CAPSTAN BRAKE ASSY	ABC
△ 85	QAR0224-002	CAPSTAN MOTOR	ABC
86	QYTPSG2606Z	TAP SCREW,X3,CAP.MOTOR	ABC
87	LP30005-010A	BELT,CAPSTAN MOTOR	ABC
88	LP30970-001A	IDLER ARM	ABC
89	LP40828-004A	IDLER GEAR 1,X2	ABC
90	LP40829-001B	IDLER GEAR 2,X2	ABC
91	LP31014-001A	WIRE HOLDER	ABC
93	LP40934-001B	CLUTCH UNIT	ABC
94	PQM30017-47	SLIT WASHER,CLUT.UNIT	ABC
95	LP30973-001A	DIRECT GEAR	ABC
96	LP40939-001A	COMPRESION SPRING,DIR.GEAR	ABC
102	LP30974-001C	CHANGE LEVER	ABC
105	LP21049-001A	REEL DISK,X2	ABC
107	LP30017-004A	SPACER,X2,REEL DISK	ABC
110	LP10401-001H	SIDE FRAME(L)	ABC
111	LP10402-001K	SIDE FRAME(R)	ABC
112	QYTDST2606Z	TAP SCREW,X2,FOR MECHA	ABC
113	LP40917-001D	TORSION SPRING,FOR DUMP.	ABC
114	LP30976-001E	SIDE PLATE	ABC
115	LP30977-002D	LIMIT PLATE	ABC
116	LP40846-001C	LIMIT SPRING,SIDE PLATE	ABC

# REF No.	PART No.	PART NAME, DESCRIPTION	ABC
117	LP31100-001B	DRIVE LEVER	ABC
118	LP30978-001B	DRIVE ARM(L)	ABC
119	LP30979-001P	DRIVE ARM(R)	ABC
120	LP40847-001B	TORSION SPRING,D.ARM(R)	ABC
121	LP30980-001E	CONNECT PLATE	ABC
122	LP10403-001C	SIDE HOLDER(L)	ABC
123	LP10404-001E	SIDE HOLDER(R)	ABC
124	LP30983-001B	LOCK LEVER(L)	ABC
125	LP30984-001B	LOCK LEVER(R)	ABC
126	LP40924-001D	TENSION SPRING,X2,L.LEVER	ABC
127	LP40972-001A	EARTH SPRING(1)	ABC
128	LP40857-001B	EARTH SPRING(2),TOP FRAME	ABC
130	LP30981-001G	CASSETTE HOLDER ASSY	ABC
134	LP21051-002C	REC SAFETY LEVER	ABC
137	LP21052-001J	TOP FRAME	ABC
151	LP30985-001G	DOOR OPENER,SIDE FRM(R)	ABC
161	LP40993-001A	TAPE GUIDE	ABC
WR1	WJT0059-001D	E-CARD WIRE,CAP MOTOR	ABC
WR2	WJT0067-001B	E-CARD WIRE,A/C HEAD	ABC
WR3	WJS0022-001A	E-FL/RB WIRE,L.MOTOR	ABC

MAIN BOARD ASSEMBLY <03>

PW1 MAIN BOARD ASS'Y<03> includes the parts shown in the following.

PW1 3D D/2M BOARD ASS'Y<05>

PW1 TERMINAL BOARD ASS'Y<06>

PW1 DEMOD BOARD ASS'Y<14>

PW1	LPA10170-07B	MAIN BOARD ASSY	A
PW1	LPA10170-11B	MAIN BOARD ASSY	B
PW1	LPA10170-14A	MAIN BOARD ASSY	C
IC1	JCP8051-MSA	IC,VIDEO	ABC
IC201	LC74776-9791	IC	AB
IC201	LC74789N-9865	IC(OSD)	C
IC2201	AN3651FBP	IC	ABC
IC3001	HD6432194SBD35F	IC(MCU),MAIN CPU	AB
IC3001	HD6432194SAD37F	IC(MCU),MAIN CPU	C
IC3001 or	HD64F2194CFD35	IC(MCU),MAIN CPU	AB
IC3001 or	HD64F2194CFD37	IC(MCU),MAIN CPU	C
IC3002	IC-PST3427U-X	IC,RESET	ABC
IC3003	*(REFER TO BELOW)	IC,EEPROM(32K)	ABC
IC7002	GP1UM291QK	IR DETECT UNIT	ABC
Q7	2SC4081/QRS/-X	TRANSISTOR,RF EQ(S)	ABC
Q7 or	2PC4081/R/-X	TRANSISTOR	ABC
Q8	2SC4081/QRS/-X	TRANSISTOR,RF EQ(S)	ABC
Q8 or	2PC4081/R/-X	TRANSISTOR	ABC
Q9	2SA1576A/QR/-X	TRANSISTOR,RF EQ(S)	ABC
Q9 or	2PA1576/R/-X	TRANSISTOR	ABC
Q10	2SA1576A/QR/-X	TRANSISTOR,FSC BUF	ABC
Q10 or	2PA1576/R/-X	TRANSISTOR	ABC
Q16	DTC144WUA-X	DIGI TRANSISTOR,DEMP(SP/EP)	ABC
Q16 or	UN521E-X	DIGI TRANSISTOR	ABC
Q16 or	RN1309-X	DIGI TRANSISTOR	ABC
Q16 or	PDTC144WU-X	DIGI TRANSISTOR	ABC
Q21	2SA1576A/QR/-X	TRANSISTOR,PB C BUF	ABC
Q21 or	2PA1576/R/-X	TRANSISTOR	ABC
Q24	2SA1576A/QR/-X	TRANSISTOR,2FSC BUF	ABC
Q24 or	2PA1576/R/-X	TRANSISTOR	ABC
Q25	DTC144WUA-X	DIGI TRANSISTOR,C.K.(3D)	ABC

* S8960EX : LPN0797-001B-04 The VCR goes to jig RCU mode after replacing the EEPROM and the VCR does not accept some RCU command.
S8965EK : LPN0797-004B-05 Therefore please set the VCR to the user RCU mode after replacing the EEPROM.
S8960AG : LPN0813-001A-02 The method of setting the VCR to the user RCU mode is written on the service manual.

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
Q25	or UN521E-X	DIGI TRANSISTOR	ABC	Q2061	or 2PC4081/R/-X	TRANSISTOR	ABC
Q25	or RN1309-X	DIGI TRANSISTOR	ABC	Q2062	2SA1576A/QR/-X	TRANSISTOR	ABC
Q25	or PDTC144WU-X	DIGI TRANSISTOR	ABC	Q2062	or 2SB1218A/QR/-X	TRANSISTOR	ABC
Q38	2SC4081/QRS/-X	TRANSISTOR,Y BDL	ABC	Q2062	or 2PA1576/R/-X	TRANSISTOR	ABC
Q38	or 2PC4081/R/-X	TRANSISTOR	ABC	Q2063	DTC144WUA-X	DIGI TRANSISTOR	ABC
Q41	DTC144WUA-X	DIGI TRANSISTOR,MESECAM	ABC	Q2063	or UN521E-X	DIGI TRANSISTOR	ABC
Q41	or UN521E-X	DIGI TRANSISTOR	ABC	Q2063	or RN1309-X	DIGI TRANSISTOR	ABC
Q41	or RN1309-X	DIGI TRANSISTOR	ABC	Q2063	or PDTC144WU-X	DIGI TRANSISTOR	ABC
Q41	or PDTC144WU-X	DIGI TRANSISTOR	ABC	Q2201	DTA144WUA-X	DIGI TRANSISTOR	ABC
Q50	DTC144WUA-X	DIGI TRANSISTOR,EE(L)	ABC	Q2201	or PDTA144WU-X	DIGI TRANSISTOR	ABC
Q50	or UN521E-X	DIGI TRANSISTOR	ABC	Q2201	or UN511E-X	DIGI TRANSISTOR	ABC
Q50	or RN1309-X	DIGI TRANSISTOR	ABC	Q2201	or RN2309-X	D TRANSISTOR	ABC
Q50	or PDTC144WU-X	DIGI TRANSISTOR	ABC	Q2202	DTC144WUA-X	DIGI TRANSISTOR	ABC
Q207	2SA1576A/QR/-X	TRANSISTOR,OSD OUT	ABC	Q2202	or PDTC144WU-X	DIGI TRANSISTOR	ABC
Q207	or 2PA1576/R/-X	TRANSISTOR,OSD OUT	ABC	Q2202	or UN521E-X	DIGI TRANSISTOR	ABC
Q208	2SC4081/QRS/-X	TRANSISTOR,OSD OUT	ABC	Q2202	or RN1309-X	DIGI TRANSISTOR	ABC
Q208	or 2PC4081/R/-X	TRANSISTOR,OSD OUT	ABC	Q2203	2SC4081/QRS/-X	TRANSISTOR	ABC
Q401	2SA1576A/QR/-X	TRANSISTOR	ABC	Q2203	or 2PC4081/R/-X	TRANSISTOR	ABC
Q402	2SA1576A/QR/-X	TRANSISTOR	ABC	Q2203	or 2SD1819A/QRS/-X	TRANSISTOR	ABC
Q403	DTC144WUA-X	DIGI TRANSISTOR	ABC	Q2204	2SC4081/QRS/-X	TRANSISTOR	ABC
Q403	or PDTC144WU-X	DIGI TRANSISTOR	ABC	Q2204	or 2PC4081/R/-X	TRANSISTOR	ABC
Q403	or UN521E-X	DIGI TRANSISTOR	ABC	Q2204	or 2SD1819A/QRS/-X	TRANSISTOR	ABC
Q403	or RN1309-X	DIGI TRANSISTOR	ABC	Q2251	DTC144WUA-X	DIGI TRANSISTOR	ABC
Q404	DTC144WUA-X	DIGI TRANSISTOR	ABC	Q2251	or PDTC144WU-X	DIGI TRANSISTOR	ABC
Q404	or PDTC144WU-X	DIGI TRANSISTOR	ABC	Q2251	or UN521E-X	DIGI TRANSISTOR	ABC
Q404	or UN521E-X	DIGI TRANSISTOR	ABC	Q2251	or RN1309-X	DIGI TRANSISTOR	ABC
Q404	or RN1309-X	DIGI TRANSISTOR	ABC	Q2252	DTC144WUA-X	DIGI TRANSISTOR	ABC
Q405	2SA1576A/QR/-X	TRANSISTOR	ABC	Q2252	or PDTC144WU-X	DIGI TRANSISTOR	ABC
Q2001	2SC4081/QRS/-X	TRANSISTOR	ABC	Q2252	or UN521E-X	DIGI TRANSISTOR	ABC
Q2001	or 2SD1819A/QRS/-X	TRANSISTOR	ABC	Q2252	or RN1309-X	DIGI TRANSISTOR	ABC
Q2001	or 2PC4081/R/-X	TRANSISTOR	ABC	Q2253	DTC144WUA-X	DIGI TRANSISTOR	ABC
Q2002	2SC4081/QRS/-X	TRANSISTOR	ABC	Q2253	or PDTC144WU-X	DIGI TRANSISTOR	ABC
Q2002	or 2SD1819A/QRS/-X	TRANSISTOR	ABC	Q2253	or UN521E-X	DIGI TRANSISTOR	ABC
Q2002	or 2PC4081/R/-X	TRANSISTOR	ABC	Q2253	or RN1309-X	DIGI TRANSISTOR	ABC
Q2003	DTA144WUA-X	DIGI TRANSISTOR	ABC	Q2254	DTC114EUA-X	DIGI TRANSISTOR	ABC
Q2003	or UN511E-X	DIGI TRANSISTOR	ABC	Q2254	or PDTC114EU-X	DIGI TRANSISTOR	ABC
Q2003	or RN2309-X	D TRANSISTOR	ABC	Q2254	or UN5211-X	DIGI TRANSISTOR	ABC
Q2003	or PDTA144WU-X	DIGI TRANSISTOR	ABC	Q2254	or RN1302-X	DIGI TRANSISTOR	ABC
Q2004	DTC144WUA-X	DIGI TRANSISTOR	ABC	Q2255	DTC114EUA-X	DIGI TRANSISTOR	ABC
Q2004	or PDTC144WU-X	DIGI TRANSISTOR	ABC	Q2255	or PDTC114EU-X	DIGI TRANSISTOR	ABC
Q2004	or UN521E-X	DIGI TRANSISTOR	ABC	Q2255	or UN5211-X	DIGI TRANSISTOR	ABC
Q2004	or RN1309-X	DIGI TRANSISTOR	ABC	Q2255	or RN1302-X	DIGI TRANSISTOR	ABC
Q2051	2SC4081/QRS/-X	TRANSISTOR	ABC	Q3002	PTZ-NV16A	IC(PHOTO SENSOR,STA.SENSOR	ABC
Q2051	or 2SD1819A/QRS/-X	TRANSISTOR	ABC	Q3003	PTZ-NV16A	IC(PHOTO SENSOR,END SENSOR	ABC
Q2051	or 2PC4081/R/-X	TRANSISTOR	ABC	Q3004	2SD1819A/QRS/-X	TRANSISTOR,POWER DET	ABC
Q2052	2SA1576A/QR/-X	TRANSISTOR	ABC	Q3004	or 2SC4081/QRS/-X	TRANSISTOR,POWER DET	ABC
Q2052	or 2SB1218A/QR/-X	TRANSISTOR	ABC	Q3004	or 2PC4081/R/-X	TRANSISTOR,POWER DET	ABC
Q2052	or 2PA1576/R/-X	TRANSISTOR	ABC	Q3005	2SD1819A/QRS/-X	TRANSISTOR,SVCC	ABC
Q2053	DTC144WUA-X	DIGI TRANSISTOR	ABC	Q3005	or 2SC4081/QRS/-X	TRANSISTOR,SVCC	ABC
Q2053	or UN521E-X	DIGI TRANSISTOR	ABC	Q3005	or 2PC4081/R/-X	TRANSISTOR,SVCC	ABC
Q2053	or RN1309-X	DIGI TRANSISTOR	ABC	Q3007	UN521E-X	DIGI TRANSISTOR,P50	AB
Q2053	or PDTC144WU-X	DIGI TRANSISTOR	ABC	Q3007	or DTC144WUA-X	DIGI TRANSISTOR,P50	AB
Q2054	2SA1576A/QR/-X	TRANSISTOR	ABC	Q3007	or PDTC144WU-X	DIGI TRANSISTOR,P50	AB
Q2054	or 2SB1218A/QR/-X	TRANSISTOR	ABC	Q3007	or RN1309-X	DIGI TRANSISTOR,P50	AB
Q2054	or 2PA1576/R/-X	TRANSISTOR	ABC	Q4001	UN5211-X	DIGI TRANSISTOR	ABC
Q2055	DTC144WUA-X	DIGI TRANSISTOR	ABC	Q4001	or DTC114EUA-X	DIGI TRANSISTOR	ABC
Q2055	or UN521E-X	DIGI TRANSISTOR	ABC	Q4001	or RN1302-X	DIGI TRANSISTOR	ABC
Q2055	or RN1309-X	DIGI TRANSISTOR	ABC	Q4001	or PDTC114EU-X	DIGI TRANSISTOR	ABC
Q2055	or PDTC144WU-X	DIGI TRANSISTOR	ABC	Q5101	2SK2632-CB14	POWER MOS FET	ABC
Q2061	2SC4081/QRS/-X	TRANSISTOR	ABC	Q5101	or 2SK2129-LT	POWER MOS FET	ABC
Q2061	or 2SD1819A/QRS/-X	TRANSISTOR	ABC	Q5101	or 2SK2632	POWER MOS FET	ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

# REF No.	PART No.	PART NAME, DESCRIPTION	ABC	# REF No.	PART No.	PART NAME, DESCRIPTION	ABC
Q5101 or	2SK2129	POWER MOS FET	ABC	Q7201	2SC1317/RS/-T	TRANSISTOR	AB
Q5102	2SD2144S/UV/-T	TRANSISTOR	ABC	D1	QUY153-050Y	IM BUS WIRE,ESD	ABC
Q5301	2SC1740S/RS/-T	TRANSISTOR	ABC	D201	QRE141J-152Y	C RESISTOR,OSD CS	1.5kΩ,1/4W AB
Q5301 or	2SC3199/YG/-T	TRANSISTOR	ABC	D201	1SS133-T2	SI DIODE,OSD CS	C
Q5303	2SC5739/QP/-	TRANSISTOR,SW5V	ABC	D202	QRE141J-101Y	C RESISTOR,S.CLK	100Ω,1/4W AB
Q5304	2SD2144S/UV/-T	TRANSISTOR,SW12V	ABC	D202	1SS133-T2	SI DIODE,S.CLK	C
Q5305	DTA114EUA-X	DIGI TRANSISTOR,SW12V	ABC	D203	QRE141J-101Y	C RESISTOR,S.DATA	100Ω,1/4W AB
Q5305 or	UN5111-X	DIGI TRANSISTOR,SW12V	ABC	D203	1SS133-T2	SI DIODE,S.DATA	C
Q5305 or	RN2302-X	D TRANSISTOR,SW12V	ABC	D2251	1SS133-T2	SI DIODE	ABC
Q5305 or	PDTA114EU-X	DIGI TRANSISTOR,SW12V	ABC	D2251 or	1SS270A-T2	SI DIODE	ABC
Q5306	DTC114EUA-X	DIGI TRANSISTOR,SW12V	ABC	D3001	LNB2301L01VI	IR LED,LED	ABC
Q5306 or	UN5211-X	DIGI TRANSISTOR,SW12V	ABC	D3002	1SS133-T2	SI DIODE	ABC
Q5306 or	RN1302-X	DIGI TRANSISTOR,SW12V	ABC	D3002 or	1SS270A-T2	SI DIODE	ABC
Q5306 or	PDTC114EU-X	DIGI TRANSISTOR,SW12V	ABC	D3003	RD39ES/B3/-T2	Z DIODE,POWER DET	ABC
Q5307	2SD2144S/UV/-T	TRANSISTOR,RF5V	ABC	D3003 or	MTZJ39C-T2	Z DIODE,POWER DET	ABC
Q6030	2SB1218A/QR/-X	TRANSISTOR,V BUFF	ABC	D3004	11ES2-T2	SI DIODE,BU5V	ABC
Q6030 or	2SA1576A/QR/-X	TRANSISTOR	ABC	D3004 or	1A3G-T2	SI DIODE,BU5V	ABC
Q6030 or	2PA1576/R/-X	TRANSISTOR	ABC	D3005	11ES2-T2	SI DIODE,AL5V	ABC
Q6031	DTC114EUA-X	DIGI TRANSISTOR	ABC	D3005 or	1A3G-T2	SI DIODE,AL5V	ABC
Q6031 or	UN5211-X	DIGI TRANSISTOR	ABC	△ D3007	RB721Q-40-T2	SB DIODE,LITH BATT	C
Q6031 or	RN1302-X	DIGI TRANSISTOR	ABC	D3008	1SS355-X	SI DIODE,P50	AB
Q6031 or	PDTC114EU-X	DIGI TRANSISTOR	ABC	D4001	QUY153-050Y	IM BUS WIRE	ABC
Q6032	DTC114EUA-X	DIGI TRANSISTOR	ABC	D4002	QUY153-050Y	IM BUS WIRE	ABC
Q6032 or	UN5211-X	DIGI TRANSISTOR	ABC	D5001	S1WB/A/60-4102	BRIDGE DIODE	ABC
Q6032 or	RN1302-X	DIGI TRANSISTOR	ABC	D5001 or	S1WB/A/60-X	BRIDGE DIODE	ABC
Q6032 or	PDTC114EU-X	DIGI TRANSISTOR	ABC	D5001 or	S1WB(A)60F4072X	BRIDGE DIODE	ABC
Q7001	2SB1218A/QR/-X	TRANSISTOR	ABC	D5101	AU01-T2	SI DIODE	ABC
Q7001 or	2SA1576A/QR/-X	TRANSISTOR	ABC	D5101 or	1SR153-400-T2	FR DIODE	ABC
Q7001 or	2PA1576/R/-X	TRANSISTOR	ABC	D5101 or	ERA18-04-T2	FR DIODE	ABC
Q7002	2SB1218A/QR/-X	TRANSISTOR	ABC	D5101 or	10ELS4-T2	FR DIODE	ABC
Q7002 or	2SA1576A/QR/-X	TRANSISTOR	ABC	D5102	AU01-T2	SI DIODE	ABC
Q7002 or	2PA1576/R/-X	TRANSISTOR	ABC	D5102 or	1SR153-400-T2	FR DIODE	ABC
Q7003	2SB1218A/QR/-X	TRANSISTOR	ABC	D5102 or	ERA18-04-T2	FR DIODE	ABC
Q7003 or	2SA1576A/QR/-X	TRANSISTOR	ABC	D5102 or	10ELS4-T2	FR DIODE	ABC
Q7003 or	2PA1576/R/-X	TRANSISTOR	ABC	D5103	1SS133-T2	SI DIODE	ABC
Q7004	2SB1218A/QR/-X	TRANSISTOR	ABC	D5103 or	1SS270A-T2	SI DIODE	ABC
Q7004 or	2SA1576A/QR/-X	TRANSISTOR	ABC	D5105	1SS133-T2	SI DIODE	ABC
Q7004 or	2PA1576/R/-X	TRANSISTOR	ABC	D5105 or	1SS270A-T2	SI DIODE	ABC
Q7005	2SB1218A/QR/-X	TRANSISTOR	ABC	D5203	AU01Z-T2	FR DIODE	ABC
Q7005 or	2SA1576A/QR/-X	TRANSISTOR	ABC	D5203 or	10ELS2-T2	FR DIODE	ABC
Q7005 or	2PA1576/R/-X	TRANSISTOR	ABC	D5204	AU01Z-T2	FR DIODE	ABC
Q7006	2SB1218A/QR/-X	TRANSISTOR,V15 7SEG	ABC	D5204 or	10ELS2-T2	FR DIODE	ABC
Q7006 or	2SA1576A/QR/-X	TRANSISTOR	ABC	D5207	AK04-T2	SB DIODE,6V	ABC
Q7006 or	2PA1576/R/-X	TRANSISTOR	ABC	D5207 or	11EQS04-T2	SB DIODE,6V	ABC
Q7007	2SB1218A/QR/-X	TRANSISTOR,V15 7SEG	ABC	D5207 or	1S4-T2	SB DIODE,6V	ABC
Q7007 or	2SA1576A/QR/-X	TRANSISTOR	ABC	D5207 or	SBO40-T2	SB DIODE,6V	ABC
Q7007 or	2PA1576/R/-X	TRANSISTOR	ABC	D5209	AK04-T2	SB DIODE,6V	ABC
Q7008	DTC143TUA-X	DIGI TRANSISTOR	ABC	D5209 or	11EQS04-T2	SB DIODE,6V	ABC
Q7008 or	UN5216-X	D TRANSISTOR	ABC	D5209 or	1S4-T2	SB DIODE,6V	ABC
Q7009	DTC143TUA-X	DIGI TRANSISTOR	ABC	D5209 or	SBO40-T2	SB DIODE,6V	ABC
Q7009 or	UN5216-X	D TRANSISTOR	ABC	D5210	AU01Z-T2	FR DIODE,BT2	ABC
Q7010	DTC143TUA-X	DIGI TRANSISTOR	ABC	D5210 or	ERA18-02-T2	FR DIODE,BT2	ABC
Q7010 or	UN5216-X	D TRANSISTOR	ABC	D5210 or	1SR153-400-T2	FR DIODE,BT2	ABC
Q7011	DTC143TUA-X	DIGI TRANSISTOR	ABC	D5210 or	10ELS2-T2	FR DIODE,BT2	ABC
Q7011 or	UN5216-X	D TRANSISTOR	ABC	D5210 or	PG104RS-T2	FR DIODE,BT2	ABC
Q7012	DTC143TUA-X	DIGI TRANSISTOR	ABC	D5301	MTZJ15C-T2	Z DIODE	ABC
Q7012 or	UN5216-X	D TRANSISTOR	ABC	D5301 or	RD15ES/B3/-T2	Z DIODE	ABC
Q7013	DTC143TUA-X	DIGI TRANSISTOR	ABC	D5302	MTZJ11C-T2	Z DIODE,SW12V	ABC
Q7013 or	UN5216-X	D TRANSISTOR	ABC	D5302 or	RD11ES/B3/-T2	Z DIODE,SW12V	ABC
Q7014	DTC143TUA-X	DIGI TRANSISTOR	ABC	D5303	MTZJ5.6A-T2	Z DIODE	ABC
Q7014 or	UN5216-X	D TRANSISTOR	ABC	D5303 or	RD5.6ES/B1/-T2	Z DIODE	ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
D5305	MTZJ5.6C-T2	Z DIODE,SW5V	ABC	R406	NRSA02J-393X	MG RESISTOR	39kΩ, 1/10W ABC
D5305 or	RD5.6ES/B3/-T2	Z DIODE,SW5V	ABC	R407	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
D6002	HZ30-2L-T2	Z DIODE	ABC	R408	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
D6002 or	HZ30-2LTD	Z DIODE (M)	ABC	R2041	QRE141J-0R0	C RESISTOR	0Ω, 1/4W ABC
D7051	1SS133-T2	SI DIODE,ESD	ABC	R2003	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC
D7051 or	1SS270A-T2	SI DIODE,ESD	ABC	R2005	NRSA02J-153X	MG RESISTOR	15kΩ, 1/10W ABC
R1	NRSA02J-622X	MG RESISTOR	6.2kΩ, 1/10W ABC	R2007	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W ABC
R2	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W ABC	R2008	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W ABC	R2010	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W ABC
R5	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R2013	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC
R6	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W ABC	R2014	NRSA02J-224X	MG RESISTOR	220kΩ, 1/10W ABC
R7	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W ABC	R2015	NRSA02J-181X	MG RESISTOR	180Ω, 1/10W ABC
R10	QRE141J-103Y	C RESISTOR	10kΩ, 1/4W ABC	R2016	NRSA02J-393X	MG RESISTOR	39kΩ, 1/10W ABC
R25	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	R2017	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W ABC
R26	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC	R2018	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R27	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W ABC	R2019	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R28	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W ABC	R2020	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R29	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W ABC	R2053	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W ABC
R31	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W ABC	R2054	NRSA02J-153X	MG RESISTOR	15kΩ, 1/10W ABC
R32	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC	R2055	NRSA02J-3R3X	MG RESISTOR	3.3Ω, 1/10W ABC
R35	NDC21HJ-470X	C CAPACITOR	47pF, 50V ABC	R2056	QRE141J-101Y	C RESISTOR	100Ω, 1/4W ABC
R36	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W ABC	R2057	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
R38	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W ABC	R2058	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W ABC
R39	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W C	R2059	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
R40	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC	R2060	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W ABC
R41	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W ABC	R2061	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W ABC
R42	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W ABC	R2062	NRSA02J-3R3X	MG RESISTOR	3.3Ω, 1/10W ABC
R46	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC	R2063	QRE141J-151Y	C RESISTOR	150Ω, 1/4W ABC
R48	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R2064	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
R51	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W ABC	R2065	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W ABC
R52	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	R2201	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
R77	NRSA02J-223X	MG RESISTOR	22kΩ, 1/10W ABC	R2202	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC
R78	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W ABC	R2203	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
R84	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	R2204	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC
R88	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R2205	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
R90	NRSA02J-391X	MG RESISTOR	390Ω, 1/10W ABC	R2206	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC
R93	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W ABC	R2207	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
R104	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC	R2208	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC
R117	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W ABC	R2209	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W ABC
R118	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R2210	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R201	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R2211	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W ABC
R202	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	R2212	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W ABC
R203	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W C	R2213	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R204	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W C	R2214	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W ABC
R208	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W ABC	R2215	NRSA02J-181X	MG RESISTOR	180Ω, 1/10W ABC
R208	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W C	R2216	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W ABC
R209	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W AB	R2217	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R210	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W AB	R2218	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W ABC
R211	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W AB	R2219	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W ABC
R212	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	R2220	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC
R213	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R2222	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R216	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	R2223	NRSA02J-511X	MG RESISTOR	510Ω, 1/10W ABC
R220	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W C	R2224	NRSA02J-511X	MG RESISTOR	510Ω, 1/10W ABC
R224	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	R2225	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R225	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC	R2226	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W ABC
R226	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R2227	NRSA02J-393X	MG RESISTOR	39kΩ, 1/10W ABC
R401	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W ABC	R2228	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W ABC
R402	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W ABC	R2229	NRSA02J-393X	MG RESISTOR	39kΩ, 1/10W ABC
R403	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W ABC	R2230	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC
R404	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC	R2231	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC
R405	NRSA02J-683X	MG RESISTOR	68kΩ, 1/10W ABC	R2232	NRSA02J-473X	MG RESISTOR	47kΩ, 1/10W ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
R2233	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC	R3071	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R2234	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	R3072	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC
R2235	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W AB	R3073	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R2236	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W AB	R3074	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R2237	NRSA02J-681X	MG RESISTOR	680Ω, 1/10W AB	R3075	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC
R2238	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W AB	R3076	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC
R2251	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	R3077	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB
R2252	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W ABC	R3078	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R2253	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	R3079	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R2254	QRE141J-103Y	C RESISTOR	10kΩ, 1/4W ABC	R3080	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC
R2255	NRSA02J-273X	MG RESISTOR	27kΩ, 1/10W ABC	R3081	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R2256	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W ABC	R3083	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3011	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W AB	R3085	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3013	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3086	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3014	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3087	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3015	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3088	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3016	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3089	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3017	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3090	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3018	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W AB	R3091	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3019	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3092	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3020	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3093	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3021	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3094	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3022	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3095	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3025	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	R3096	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3026	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	R3097	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3027	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	R3103	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3029	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3104	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3030	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3105	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3031	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W AB	R3106	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC
R3032	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3205	QRE141J-181Y	C RESISTOR	180Ω, 1/4W ABC
R3033	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB	R3206	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W ABC
R3034	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3207	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W ABC
R3035	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R3208	NRSA02J-121X	MG RESISTOR	120Ω, 1/10W ABC
R3036	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	R3209	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W ABC
R3037	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3210	NRSA02J-121X	MG RESISTOR	120Ω, 1/10W ABC
R3038	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W ABC	R3211	NRSA02J-183X	MG RESISTOR	18kΩ, 1/10W ABC
R3039	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3212	NRSA02J-474X	MG RESISTOR	470kΩ, 1/10W ABC
R3040	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	R3213	NRSA02J-334X	MG RESISTOR	330kΩ, 1/10W ABC
R3041	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R3214	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3042	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3215	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3044	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB	R3216	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3046	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3217	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3047	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3218	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R3048	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R3219	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R3049	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R3220	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W ABC
R3050	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R3222	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R3051	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3223	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R3052	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC	R3224	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R3053	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC	R3225	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3054	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3229	NRSA02J-105X	MG RESISTOR	1MΩ, 1/10W ABC
R3055	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3230	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC
R3056	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3231	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC
R3057	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3233	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3058	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3234	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3059	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R3235	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W ABC
R3060	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R3236	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W ABC
R3061	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R3237	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3062	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	R3238	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3063	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	R3241	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC
R3066	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	R3242	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W AB
R3069	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	R3252	NRSA02J-153X	MG RESISTOR	15kΩ, 1/10W ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
R3253	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	R7033	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W ABC
R4003	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W ABC	R7034	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W ABC
R4004	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W ABC	R7160	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC
R4005	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W ABC	R7161	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC
R4007	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R7162	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC
R4008	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R7163	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W ABC
R4009	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	R7202	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W AB
R4010	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	R7203	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W AB
R4012	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W ABC	R7204	QRE121J-100Y	C RESISTOR	10Ω, 1/2W AB
R4013	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	VR2251	QVP0039-223Z	TRIM RESISTOR	ABC
R4015	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W ABC	B5	NRSA02J-0R0X	MG RESISTOR,PB FM BUF	0Ω, 1/10W ABC
R4017	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	B10	NRSA02J-0R0X	MG RESISTOR,C IN(SVHS)	0Ω, 1/10W ABC
R5101	QRE141J-224Y	C RESISTOR	220kΩ, 1/4W ABC	B13	QUY160-180Y	IM BUS WIRE,V,REF	ABC
R5102	QRE141J-224Y	C RESISTOR	220kΩ, 1/4W ABC	B65	NRSA02J-0R0X	MG RESISTOR,TITLE REC	0Ω, 1/10W ABC
R5103	QRE141J-683Y	C RESISTOR	68kΩ, 1/4W ABC	B203	QUY160-100Y	IM BUS WIRE,I2C CLK2	AB
R5104	QRG02GJ-683	OMF RESISTOR	68kΩ,2W ABC	B204	QUY160-080Y	IM BUS WIRE,I2C DATA2	AB
R5106	QRT01DJ-R39X	MF RESISTOR	0.39Ω,1W ABC	B214	NRSA02J-0R0X	MG RESISTOR,RF VIDEO	0Ω, 1/10W ABC
R5107	QRE121J-331Y	C RESISTOR	330Ω, 1/2W ABC	B2221	QUY160-140Y	IM BUS WIRE,AL5V	ABC
R5108	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W ABC	B3001	QUY160-060Y	IM BUS WIRE,ICT	ABC
R5109	QRE141J-561Y	C RESISTOR	560Ω, 1/4W ABC	B5001	QUY160-100Y	IM BUS WIRE,OPT:LF5001	ABC
R5110	NRSA02J-224X	MG RESISTOR	220kΩ, 1/10W ABC	B5002	QUY160-100Y	IM BUS WIRE,OPT:LF5001	ABC
R5111	NRSA02J-391X	MG RESISTOR	390Ω, 1/10W ABC	B7160	NRSA02J-0R0X	MG RESISTOR,LITH BATT	0Ω, 1/10W C
R5112	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W ABC	C1	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R5302	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	C2	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R5303	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W ABC	C3	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R5304	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC	C4	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R5306	NRSA02J-181X	MG RESISTOR	180Ω, 1/10W ABC	C5	QEKCOJM-476Z	E CAPACITOR	47μF,6.3V ABC
R5310	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	C6	QDYB1CM-103Y	C CAPACITOR	0.01μF,16V ABC
R5312	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	C7	NCB21HK-102X	C CAPACITOR	0.001μF,50V ABC
R5313	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	C8	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R5319	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W ABC	C9	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V ABC
R5332	QRL02DJ-391X	OMF RESISTOR	390Ω,2W ABC	C10	NDC21HJ-151X	C CAPACITOR	150pF,50V ABC
R6020	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	C11	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R6021	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	C12	NDC21HJ-8R0X	C CAPACITOR	8pF,50V ABC
R6030	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	C14	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R6031	NRSA02J-271X	MG RESISTOR	270Ω, 1/10W ABC	C15	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC
R6032	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	C16	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R6033	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W ABC	C17	QEKJ1HM-335Z	E CAPACITOR	3.3μF,50V ABC
R6050	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	C19	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V ABC
R6051	QRE141J-101Y	C RESISTOR	100Ω, 1/4W ABC	C20	QEPF1HM-105Z	BP E CAPACITOR	1μF,50V ABC
R6052	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	C21	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R6080	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	C22	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V ABC
R6056	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	C23	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC
R7001	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W ABC	C24	QCB1HK-104Y	C CAPACITOR	0.1μF,50V ABC
R7002	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W ABC	C25	NDC21HJ-6R0X	C CAPACITOR	6pF,50V ABC
R7003	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W ABC	C26	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC
R7004	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC	C27	NCB21HK-223X	C CAPACITOR	0.022μF,50V ABC
R7005	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W ABC	C28	QEKJ1HM-335Z	E CAPACITOR	3.3μF,50V ABC
R7006	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W ABC	C29	NCB21EK-333X	C CAPACITOR	0.033μF,25V ABC
R7007	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W ABC	C30	NCB21CK-474X	C CAPACITOR	0.47μF,16V ABC
R7015	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W ABC	C31	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V ABC
R7020	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	C32	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC
R7021	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W ABC	C33	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V ABC
R7022	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W ABC	C34	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC
R7023	NRSA02J-222X	MG RESISTOR	2.2kΩ, 1/10W ABC	C35	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC
R7024	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W ABC	C36	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V ABC
R7025	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W ABC	C37	QEKJ1HM-105Z	E CAPACITOR	1μF,50V ABC
R7026	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W ABC	C38	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V ABC
R7030	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W ABC	C40	QEKJ1EM-106Z	E CAPACITOR	10μF,25V ABC
R7031	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W ABC	C44	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC
R7032	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W ABC	C45	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
C53	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC	C2201	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC
C59	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC	C2202	QEKJ1HM-475Z	E CAPACITOR	4.7µF,25V ABC
C61	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC	C2203	QEKJ1HM-475Z	E CAPACITOR	4.7µF,25V ABC
C63	NCB21EK-104X	C CAPACITOR	0.1µF,25V ABC	C2204	QEKJ0JM-336Z	E CAPACITOR	33µF,6.3V ABC
C64	NDC21HJ-220X	C CAPACITOR	22pF,50V ABC	C2205	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC
C65	QEKJ1HM-105Z	E CAPACITOR	1µF,50V ABC	C2206	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC
C72	NDC21HJ-470X	C CAPACITOR	47pF,50V ABC	C2207	NCB21HK-153X	C CAPACITOR	0.015µF,50V ABC
C73	NDC21HJ-120X	C CAPACITOR	12pF,50V ABC	C2208	NCB21HK-153X	C CAPACITOR	0.015µF,50V ABC
C80	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC	C2209	QERF1CM-106Z	E CAPACITOR	10µF,16V ABC
C84	NRSA02J-153X	MG RESISTOR	15kΩ, 1/10W ABC	C2210	QERF1CM-106Z	E CAPACITOR	10µF,16V ABC
C92	NDC21HJ-330X	C CAPACITOR	33pF,50V ABC	C2211	QEKJ0JM-336Z	E CAPACITOR	33µF,6.3V ABC
C103	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC	C2212	QERF0JM-476Z	E CAPACITOR	47µF,6.3V ABC
C106	NCB21HK-821X	C CAPACITOR	820pF,50V ABC	C2214	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC
C108	NDC21HJ-680X	C CAPACITOR	68pF,50V ABC	C2215	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC
C110	NDC21HJ-820X	C CAPACITOR	82pF,50V ABC	C2216	QEKJ1CM-476Z	E CAPACITOR	47µF,16V ABC
C114	NDC21HJ-181X	C CAPACITOR	180pF,50V ABC	C2218	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC
C201	QEKJ0JM-227Z	E CAPACITOR	220µF,6.3V AB	C2219	QEKJ1CM-226Z	E CAPACITOR	22µF,16V ABC
C201	QEKJ0JM-107Z	E CAPACITOR	100µF,6.3V C	C2220	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC
C204	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC	C2221	NCB21EK-223X	C CAPACITOR	0.022µF,25V ABC
C206	NDC21HJ-330X	C CAPACITOR	33pF,50V ABC	C2222	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC
C207	NDC21HJ-330X	C CAPACITOR	33pF,50V ABC	C2223	NCB21EK-473X	C CAPACITOR	0.047µF,25V ABC
C209	NCB21CK-474X	C CAPACITOR	0.47µF,16V AB	C2224	NCB21EK-473X	C CAPACITOR	0.047µF,25V ABC
C209	NCB21CK-224X	C CAPACITOR	0.22µF,16V C	C2225	QEKJ1HM-105Z	E CAPACITOR	1µF,50V AB
C210	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC	C2226	QEKJ1HM-105Z	E CAPACITOR	1µF,50V AB
C211	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC	C2227	QERF1CM-106Z	E CAPACITOR	10µF,16V ABC
C212	NCB21EK-104X	C CAPACITOR	0.1µF,25V AB	C2230	QEKJ1EM-106Z	E CAPACITOR	10µF,25V AB
C213	QERF1EM-475Z	E CAPACITOR	4.7µF,25V AB	C2231	QEKJ1EM-106Z	E CAPACITOR	10µF,25V AB
C214	NCB21CK-224X	C CAPACITOR	0.22µF,16V ABC	C2251	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC
C215	NCB21CK-224X	C CAPACITOR	0.22µF,16V AB	C2252	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC
C217	NDC21HJ-560X	C CAPACITOR	56pF,50V ABC	C2253	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC
C218	QEKJ1HM-105Z	E CAPACITOR	1µF,50V ABC	C2254	QEKJ0JM-476Z	E CAPACITOR	47µF,6.3V ABC
C222	QEKJ1HM-105Z	E CAPACITOR	1µF,50V ABC	C2255	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC
C225	QERF1AM-227Z	E CAPACITOR	220µF,10V AB	C2256	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC
C401	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC	C2257	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC
C402	NCB21HK-223X	C CAPACITOR	0.022µF,50V ABC	C2258	NDC21HJ-181X	C CAPACITOR	180pF,50V ABC
C403	NDC21HJ-131X	C CAPACITOR	130pF,50V ABC	C2259	QEKJ1HM-334Z	E CAPACITOR	0.33µF,50V ABC
C404	NDC21HJ-470X	C CAPACITOR	47pF,50V ABC	C2261	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC
C406	NCB21HK-102X	C CAPACITOR	0.001µF,50V ABC	C2262	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC
C407	NDC21HJ-150X	C CAPACITOR	15pF,50V ABC	C3008	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC
C2001	QEKJ1HM-475Z	E CAPACITOR	4.7µF,25V ABC	C3011	QETL0JM-338	E CAPACITOR	3300µF,6.3V AB
C2002	QEKJ1HM-105Z	E CAPACITOR	1µF,50V ABC	C3011	QETN0JM-108Z	E CAPACITOR	1000µF,6.3V C
C2003	QEKJ0JM-476Z	E CAPACITOR	47µF,6.3V ABC	C3012	QEKJ0JM-476Z	E CAPACITOR	47µF,6.3V ABC
C2005	QEKJ1HM-475Z	E CAPACITOR	4.7µF,25V ABC	C3014	QERF0JM-476Z	E CAPACITOR	47µF,6.3V ABC
C2006	NCB21HK-123X	C CAPACITOR	0.012µF,50V ABC	C3015	NCB21EK-104X	C CAPACITOR	0.1µF,25V ABC
C2007	QEKJ1CM-226Z	E CAPACITOR	22µF,16V ABC	C3016	NCB21EK-473X	C CAPACITOR	0.047µF,25V ABC
C2008	QEKJ1HM-475Z	E CAPACITOR	4.7µF,25V ABC	C3020	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC
C2009	NCB21HK-102X	C CAPACITOR	0.001µF,50V ABC	C3021	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC
C2010	NCB21HK-152X	C CAPACITOR	0.0015µF,50V ABC	C3022	NCB21EK-104X	C CAPACITOR	0.1µF,25V ABC
C2011	QEKJ1HM-475Z	E CAPACITOR	4.7µF,25V ABC	C3024	NDC21HJ-220X	C CAPACITOR	22pF,50V A C
C2012	QEKJ1HM-475Z	E CAPACITOR	4.7µF,50V ABC	C3024	NDC21HJ-120X	C CAPACITOR	12pF,50V B
C2013	NCB21HK-331X	C CAPACITOR	330pF,50V ABC	C3025	QAT3725-300Z	TRIM CAPACITOR	A C
C2017	NCB21HK-682X	C CAPACITOR	0.0068µF,50V ABC	C3026	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC
C2051	NCB21HK-331X	C CAPACITOR	330pF,50V ABC	C3027	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC
C2052	QFLC1HJ-333Z	M CAPACITOR	0.033µF,50V ABC	C3030	QEKJ0JM-476Z	E CAPACITOR	47µF,6.3V ABC
C2053	NCB21HK-332X	C CAPACITOR	0.0033µF,50V ABC	C3031	NCB21EK-473X	C CAPACITOR	0.047µF,25V AB
C2054	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC	C3033	NCB21EK-473X	C CAPACITOR	0.047µF,25V ABC
C2055	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC	C3034	NDC21HJ-101X	C CAPACITOR	100pF,50V C
C2061	QFV91HJ-333Z	MF CAPACITOR	0.033µF,50V ABC	C3035	NDC21HJ-101X	C CAPACITOR	100pF,50V C
C2062	NCB21HK-332X	C CAPACITOR	0.0033µF,50V ABC	C3036	NDC21HJ-180X	C CAPACITOR	18pF,50V ABC
C2063	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC	C3037	NDC21HJ-120X	C CAPACITOR	12pF,50V ABC
C2064	QEKJ1EM-106Z	E CAPACITOR	10µF,25V ABC	C3040	NCB21HK-103X	C CAPACITOR	0.01µF,50V ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
C3041	NDC21HJ-150X	C CAPACITOR	15pF,50V B	L201	QQL29BK-1R0Z	P COIL	1.0μH ABC
C3050	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	L202	QUY153-050Y	IM BUS WIRE	AB
C3071	QEKJ1CM-336Z	E CAPACITOR	33μF,16V ABC	L202	QQL071J-270Y	INDUCTOR	27μH C
C4002	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC	L203	QQL29BJ-220Z	P COIL	22μH ABC
C4004	QEKJ1AM-226Z	E CAPACITOR	22μF,10V ABC	L204	QQL29BJ-100Z	P COIL	10μH AB
C4005	NCB21HK-222X	C CAPACITOR	0.0022μF,50V ABC	L206	QQL071J-220Y	INDUCTOR	22μH ABC
C4006	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V ABC	L401	QQL071J-150Y	INDUCTOR	15μH ABC
C4007	NCB21HK-102X	C CAPACITOR	0.001μF,50V ABC	L402	QUY153-050Y	IM BUS WIRE	ABC
C4008	NCB21AK-105X	C CAPACITOR	1μF,10V ABC	L2001	QUY153-050Y	IM BUS WIRE	ABC
C4009	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W ABC	L2201	QUY153-050Y	IM BUS WIRE	ABC
C4010	NCB21EK-223X	C CAPACITOR	0.022μF,25V ABC	L2251	QQL29BJ-100Z	P COIL	10μH ABC
C4011	NCB21EK-104X	C CAPACITOR	0.1μF,25V ABC	L2252	QQL29BJ-151Z	P COIL	150μH ABC
C4012	QERF1HM-105Z	E CAPACITOR	1μF,50V ABC	L4001	QUY153-050Y	IM BUS WIRE	ABC
C4014	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC	L5201	PELN1184	CHOKE COIL	33μH ABC
C4015	NCB21HK-102X	C CAPACITOR	0.001μF,50V ABC	L5202	PELN1184	CHOKE COIL	33μH ABC
C4031	QEKJ1CM-336Z	E CAPACITOR	33μF,16V ABC	L6001	QQL29BJ-100Z	P COIL	10μH ABC
△ C5001	QFZ9072-473	MM CAPACITOR	0.047μF,125V ABC	L6002	QQL29BJ-100Z	P COIL	10μH ABC
△ C5004	QCZ9071-222	C CAPACITOR	0.0022μF,250V ABC	L6501	QUY153-050Y	IM BUS WIRE	ABC
C5006	QEZ0375-686	E CAPACITOR	68μF,400V ABC	L7201	QQL29BJ-100Z	P COIL	10μH AB
C5101	QCZ0212-472	C CAPACITOR	0.0047μF,1kV ABC	X1	QAX0576-001Z	CRYSTAL,PAL	ABC
C5102	QCZ0302-330Z	C CAPACITOR	33pF,1kV ABC	X2	QCB11HK-103Y	C CAPACITOR,NTSC	0.01μF,50V AB
C5104	QEKJ1HM-105Z	E CAPACITOR	1μF,50V ABC	X2	QAX0575-001Z	CRYSTAL,NTSC	C
C5105	QFN31HJ-153Z	M CAPACITOR	0.015μF,50V ABC	X3001	QAX0445-001	CRYSTAL,32K ADJ	ABC
C5106	QCB11HJ-271Y	C CAPACITOR	270pF,50V ABC	X3002	QAX0527-001	CRYSTAL	ABC
C5107	QFV91HJ-104Z	MF CAPACITOR	0.1μF,50V ABC	S3001	QSW0602-004	PUSH SWITCH,REC.SAFETY	ABC
C5202	QETN1CM-108Z	E CAPACITOR	1000μF,16V ABC	S3002	QSW0602-004	PUSH SWITCH,S.CASS	ABC
C5203	QEMT1AM-128	E CAPACITOR	1200μF,10V ABC	S7002	QSW0456-002Z	TACT SWITCH,POWER	ABC
C5204	QETJ2AM-475Z	E CAPACITOR	4.7μF,10V ABC	S7003	QSW0456-002Z	TACT SWITCH,INSERT	ABC
C5206	QEKJ1CM-476Z	E CAPACITOR	47μF,16V ABC	S7004	QSW0456-002Z	TACT SWITCH,REC LINK	ABC
C5207	QEKJ1CM-107Z	E CAPACITOR	100μF,16V ABC	S7006	QSW0456-002Z	TACT SWITCH,SVHS ET	ABC
C5301	QEKJ1CM-107Z	E CAPACITOR	100μF,16V ABC	S7010	QSW0456-002Z	TACT SWITCH,REC	ABC
C5303	QEKJ1CM-107Z	E CAPACITOR	100μF,16V ABC	S7011	QSW0456-002Z	TACT SWITCH,PAUSE	ABC
C5305	QFVF1HJ-274Z	MF CAPACITOR	0.27μF,50V ABC	S7013	QSW0456-002Z	TACT SWITCH,STOP/EJ	ABC
C5307	QEKJ1CM-476Z	E CAPACITOR	47μF,16V ABC	S7015	QSW0456-002Z	TACT SWITCH,PLAY	ABC
C5308	QEKJ1CM-107Z	E CAPACITOR	100μF,16V ABC	S7017	QSW0456-002Z	TACT SWITCH,A.DUB	ABC
C6013	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC	K2001	NRSA02J-0R0X	MG RESISTOR,SET1	0Ω,1/10W ABC
C6032	NCB21EK-473X	C CAPACITOR	0.047μF,25V ABC	K2002	NRSA02J-0R0X	MG RESISTOR,SET1	0Ω,1/10W ABC
C6037	QEKJ1EM-106Z	E CAPACITOR	10μF,25V ABC	K2003	NRSA02J-0R0X	MG RESISTOR,SET1	0Ω,1/10W ABC
C6055	NDC21HJ-220X	C CAPACITOR	22pF,50V ABC	K2004	NRSA02J-0R0X	MG RESISTOR,SET1	0Ω,1/10W ABC
C6056	NDC21HJ-470X	C CAPACITOR	47pF,50V ABC	K2251	NQR0007-001X	FERRITE BEADS	AB
C6501	QEKJ1EM-106Z	E CAPACITOR	10μF,25V ABC	K2251	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W C
C6502	NCB21HK-103X	C CAPACITOR	0.01μF,50V ABC	K2252	NQR0007-001X	FERRITE BEADS	AB
C7011	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V ABC	K2252	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W C
C7165	NCB21HK-681X	C CAPACITOR	680pF,50V ABC	K2253	NQR0007-001X	FERRITE BEADS	ABC
C7167	NCB21HK-681X	C CAPACITOR	680pF,50V ABC	K5101	QQR0678-001Z	FERRITE BEADS	ABC
C7202	QETJ0JM-477Z	E CAPACITOR	470μF,6.3V AB	K5102	QUY153-050Y	IM BUS WIRE	ABC
L1	QQL29BJ-100Z	P COIL	10μH ABC	PC3001	RPI-304J	IC(PHOTO SENSOR),SP REEL	ABC
L2	QQL071J-121Y	INDUCTOR	120μH ABC	PC3002	RPI-304J	IC(PHOTO SENSOR),TU REEL	ABC
L3	QQL29BJ-100Z	P COIL	10μH ABC	△ PC5101	PC123Y22	IC(PHOTO COUPLE)	ABC
L4	QQL29BJ-100Z	P COIL	10μH ABC	T2051	PELN0860	OSC TRANS	ABC
L5	QQR0521-012Z	NOISE FILTER	ABC	T2052	PELN0861	OSC TRANS	ABC
L12	QQR0967-001	CHOKE COIL	12μH ABC	△ T5001	QQS0083-001	SW TRANSF	ABC
L13	QQL071J-330Y	INDUCTOR	33μH ABC	TU6001	QAU0261-002	TUNER,15ALPS3SYS	ABC
L15	QQL29BJ-100Z	P COIL	10μH ABC	SD1	LP21105-001A	SHIELD CASE,FOR P/R	ABC
L18	QQL071J-220Y	INDUCTOR	22μH ABC	DI7001	LTG-0126M-03J	LED	ABC
L19	QQL071J-120Y	INDUCTOR	12μH ABC	ET1	PQ21623-2-5	EARTH PLATE(RF),FOR TUNER	ABC
L20	QUY153-050Y	IM BUS WIRE	ABC	HS1	LP40090-001A	HEAT SINK,FOR Q5101	ABC
L22	QQL231J-1R0Y	INDUCTOR	1.0μH ABC	JS3001	QSW0954-002	ROTARY ENCODER,R.ENCODER	ABC
L24	QQL071J-270Y	INDUCTOR	27μH ABC	J7105	QNN0383-002	PIN JACK,GOLD YWR	ABC
L27	QQL071J-330Y	INDUCTOR	33μH ABC	OT1	QYTD5F3010Z	TAP SCREW,X2,FOR TERM_B	ABC
L28	QQL071J-680Y	INDUCTOR	68μH ABC	OT2	PU59915-110	#500SPACER0.014,R2041	ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
	OT3	QYTDST3006Z	TAP SCREW, FOR Q5101 ABC
	FC5001	QNG0006-001Z	FUSE CLIP, FOR F5001 ABC
	FC5002	QNG0006-001Z	FUSE CLIP, FOR F5001 ABC
△	LF5002	QQR0978-001	LINE FILTER ABC
△	CP3001	QMFZ050-1R5X-E	FUSE T1.5A, 125V ABC
△	CP4001	QMFZ050-1R5X-E	FUSE T1.5A, 125V ABC
	TP106	QUY160-100Y	IM BUS WIRE, PB FM ABC
	TP111	QUY160-100Y	IM BUS WIRE, D.FF ABC
	TP2253	QUY160-100Y	IM BUS WIRE, A.PB FM ABC
	TP2254	QUY160-100Y	IM BUS WIRE, A.REC.FM ABC
	TP4001	QUY160-100Y	IM BUS WIRE, CTL.P ABC
	CN1	QGF1201C2-11	FPC CONNE, DRUM 1-11 ABC
	CN901	QGB2024K1-10S	B TO B CONNE, TERMINAL ABC
	CN902	QGB2024K1-12S	B TO B CONNE, TERMINAL ABC
	CN903	QGB2024K1-10S	B TO B CONNE, TERMINAL ABC
	CN904	QGB2024K1-11S	B TO B CONNE, TERMINAL ABC
	CN905	QGB2024K1-09S	B TO B CONNE, TERMINAL ABC
	CN2001	QGF1207C1-06	FPC CONNE, A/C HEAD ABC
	CN2002	QGB2532J1-02	B TO B CONNE, FE HEAD ABC
	CN3001	QGB2032M4-12	B TO B CONNE, CAP+DRUM M ABC
△	CN5001	QGA7901C3-02	W TO B CONNE, POWER CORD ABC
	CN7002	QGF1207C1-04	FPC CONNE, A.JOG V16 ABC
△	F5001	QMF51E2-2R0J1	FUSE T2.0A, AC250V ABC

3D DIGITAL/2M BOARD ASSEMBLY <05>

	PW1	LPA10105-09A	3D D/2M BOARD ASSY	AB
	PW1	LPA10105-07A	3D D/2M BOARD ASSY	C
	IC1401	JCP8026	IC	ABC
△	Q1401	2SC1317/RS/-T	TRANSISTOR	ABC
	Q1402	2SA1576A/QR/-X	TRANSISTOR	ABC
	Q1402 or	2PA1576/R/-X	TRANSISTOR	ABC
	Q1406	2SA1576A/QR/-X	TRANSISTOR	ABC
	Q1406 or	2PA1576/R/-X	TRANSISTOR	ABC
	Q1408	2SC4081/S/-X	TRANSISTOR	ABC
	Q1410	2SC4081/QRS/-X	TRANSISTOR	ABC
	Q1410 or	2PC4081/R/-X	TRANSISTOR	ABC
	Q1412	2SA1576A/QR/-X	TRANSISTOR	ABC
	Q1412 or	2PA1576/R/-X	TRANSISTOR	ABC
	Q1418	2SA1576A/QR/-X	TRANSISTOR	ABC
	Q1418 or	2PA1576/R/-X	TRANSISTOR	ABC
	Q1419	DTC124TUA-X	DIGI TRANSISTOR	ABC
	D1401	RD4.3ES/B3/-T2	Z DIODE	ABC
	D1401 or	MTZJ4.3B-T2	Z DIODE	ABC
	D1402	1SS133-T2	SI DIODE	ABC
	D1402 or	1N4148M-T2	DIODE	ABC
	R1401	NRSA02J-121X	MG RESISTOR	120Ω, 1/10W ABC
	R1402	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC
	R1404	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W ABC
	R1406	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W ABC
	R1410	NRSA02J-391X	MG RESISTOR	390Ω, 1/10W ABC
	R1411	NRSA02J-152X	MG RESISTOR	1.5kΩ, 1/10W ABC
	R1413	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W ABC
	R1415	NRVA02D-221X	CMF RESISTOR	220Ω, 1/10W ABC
	R1416	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W ABC
	R1417	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W ABC
	R1418	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W ABC
	R1421	NRSA02J-331X	MG RESISTOR	330Ω, 1/10W ABC
	R1426	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W ABC

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
	R1427	NRSA02J-333X	MG RESISTOR 33kΩ, 1/10W ABC
	R1428	NRSA02J-393X	MG RESISTOR 39kΩ, 1/10W ABC
	R1429	NRSA02J-182X	MG RESISTOR 1.8kΩ, 1/10W ABC
	R1430	NRSA02J-222X	MG RESISTOR 2.2kΩ, 1/10W ABC
	R1431	NRSA02J-821X	MG RESISTOR 820Ω, 1/10W ABC
	R1433	NRSA02J-510X	MG RESISTOR 51Ω, 1/10W ABC
	R1434	NRVA02D-153X	CMF RESISTOR 15Ω, 1/10W ABC
	R1435	NRVA02D-473X	CMF RESISTOR 47kΩ, 1/10W ABC
	R1436	NRVA02D-393X	CMF RESISTOR 39Ω, 1/10W ABC
	R1437	NRSA02J-392X	MG RESISTOR 3.9kΩ, 1/10W ABC
	R1438	NRSA02J-473X	MG RESISTOR 47kΩ, 1/10W ABC
	R1439	NRSA02J-273X	MG RESISTOR 27kΩ, 1/10W ABC
	R1440	NRSA02J-473X	MG RESISTOR 47kΩ, 1/10W ABC
	R1445	NRVA02D-393X	CMF RESISTOR 39Ω, 1/10W ABC
	R1446	NRSA02J-102X	MG RESISTOR 1kΩ, 1/10W ABC
	R1447	NRSA02J-102X	MG RESISTOR 1kΩ, 1/10W ABC
	R1448	NRSA02J-102X	MG RESISTOR 1kΩ, 1/10W ABC
	R1449	NRSA02J-102X	MG RESISTOR 1kΩ, 1/10W ABC
	R1450	NRSA02J-102X	MG RESISTOR 1kΩ, 1/10W ABC
	R1452	NRSA02J-471X	MG RESISTOR 470Ω, 1/10W ABC
	R1453	NRSA02J-102X	MG RESISTOR 1kΩ, 1/10W ABC
	R1455	NRSA02J-681X	MG RESISTOR 680Ω, 1/10W ABC
	R1459	NRSA02J-681X	MG RESISTOR 680Ω, 1/10W ABC
	R1460	NRSA02J-273X	MG RESISTOR 27kΩ, 1/10W ABC
	VR1401	QUY153-050Y	IM BUS WIRE ABC
	B1401	NRSA02J-0R0X	MG RESISTOR 0Ω, 1/10W ABC
	B1412	NRSA02J-0R0X	MG RESISTOR 0Ω, 1/10W ABC
	C1401	QEKJ1CM-336Z	E CAPACITOR 33μF, 16V ABC
	C1403	QEKJ0JM-337Z	E CAPACITOR 330μF, 6.3V ABC
	C1404	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1405	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1406	NCB21HK-103X	C CAPACITOR 0.01μF, 50V ABC
	C1407	NDC21HJ-680X	C CAPACITOR 68pF, 50V ABC
	C1408	NDC21HJ-330X	C CAPACITOR 33pF, 50V ABC
	C1410	QEKJ1HM-475Z	E CAPACITOR 4.7μF, 25V ABC
	C1411	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1412	NDC21HJ-680X	C CAPACITOR 68pF, 50V ABC
	C1413	NDC21HJ-330X	C CAPACITOR 33pF, 50V ABC
	C1415	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1416	QEKJ1EM-106Z	E CAPACITOR 10μF, 25V ABC
	C1417	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1418	NCB21HK-103X	C CAPACITOR 0.01μF, 50V ABC
	C1421	NDC21HJ-330X	C CAPACITOR 33pF, 50V ABC
	C1422	NDC21HJ-680X	C CAPACITOR 68pF, 50V ABC
	C1423	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1424	NCB21HK-103X	C CAPACITOR 0.01μF, 50V ABC
	C1425	NCB21HK-103X	C CAPACITOR 0.01μF, 50V ABC
	C1426	NDC21HJ-390X	C CAPACITOR 39pF, 50V ABC
	C1428	NDC21HJ-220X	C CAPACITOR 22pF, 50V ABC
	C1429	QEKJ0JM-337Z	E CAPACITOR 330μF, 6.3V ABC
	C1430	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1432	NCF21CZ-105X	C CAPACITOR 1μF, 16V ABC
	C1433	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1435	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1436	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1437	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1438	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1439	NCB21HK-103X	C CAPACITOR 0.01μF, 50V ABC
	C1440	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1441	NCF21EZ-104X	C CAPACITOR 0.1μF, 25V ABC
	C1442	NCF21CZ-105X	C CAPACITOR 1μF, 16V ABC

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
C1444	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q906	2SD1819A/QRS/-X	TRANSISTOR	AB
C1445	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q906	or 2SC4081/QRS/-X	TRANSISTOR	AB
C1446	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V ABC	Q906	or 2PC4081/R/-X	TRANSISTOR	AB
C1447	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q907	2SD1819A/QRS/-X	TRANSISTOR	AB
C1448	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V ABC	Q907	or 2SC4081/QRS/-X	TRANSISTOR	AB
C1449	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q907	or 2PC4081/R/-X	TRANSISTOR	AB
C1450	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q908	2SD1819A/QRS/-X	TRANSISTOR	AB
C1451	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V ABC	Q908	or 2SC4081/QRS/-X	TRANSISTOR	AB
C1452	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q908	or 2PC4081/R/-X	TRANSISTOR	AB
C1453	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q909	2SB1218A/QR/-X	TRANSISTOR	AB
C1454	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q909	or 2SA1576A/QR/-X	TRANSISTOR	AB
C1463	QEKJ0JM-336Z	E CAPACITOR	33μF,6.3V ABC	Q909	or 2PA1576/R/-X	TRANSISTOR	AB
C1468	NDC21HJ-101X	C CAPACITOR	100pF,50V ABC	Q910	2SB1218A/QR/-X	TRANSISTOR	AB
C1470	NDC21HJ-330X	C CAPACITOR	33pF,50V ABC	Q910	or 2SA1576A/QR/-X	TRANSISTOR	AB
C1471	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q910	or 2PA1576/R/-X	TRANSISTOR	AB
C1472	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q911	UN521E-X	DIGI TRANSISTOR	AB
C1473	NCF21EZ-104X	C CAPACITOR	0.1μF,25V ABC	Q911	or DTC144WUA-X	DIGI TRANSISTOR	AB
L1401	QUY153-050Y	IM BUS WIRE	ABC	Q911	or RN1309-X	DIGI TRANSISTOR	AB
L1402	QQL071J-6R8Y	INDUCTOR	6.8μH ABC	Q911	or PDTC144WU-X	DIGI TRANSISTOR	AB
L1403	QQL071J-6R8Y	INDUCTOR	6.8μH ABC	Q912	UN5215-X	DIGI TRANSISTOR	AB
L1404	QQL071J-6R8Y	INDUCTOR	6.8μH ABC	Q912	or DTC114TUA-X	DIGI TRANSISTOR	AB
L1405	QQL29BJ-100Z	P COIL	10μH ABC	Q912	or RN1311-X	D TRANSISTOR	AB
L1406	QQL071J-330Y	INDUCTOR	33μH ABC	Q912	or PDTC114TU-X	DIGI TRANSISTOR	AB
L1407	QQL29BJ-100Z	P COIL	10μH ABC	R503	NRSA02J-221X	MG RESISTOR	220Ω,1/10W AB
L1409	QQL071J-1R0Y	INDUCTOR	1.0μH ABC	R504	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W AB
△ LC1401	QQL29BJ-101Z	P COIL,M/I	100μH ABC	R505	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W AB
LC1402	QQR0521-006Z	NOISE FILTER	ABC	R506	NRSA02J-391X	MG RESISTOR	390Ω,1/10W AB
SD1	LP30706-001C	SHIELD FRAME(S-VHS)	AB	R507	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W AB
SD1	LP30706-001D	SHIELD FRAME(S-VHS)	C	R508	NRSA02J-151X	MG RESISTOR	150Ω,1/10W AB
SD2	LP30684-001A	SHIELD CASE(S-VHS)	ABC	R509	NRSA02J-162X	MG RESISTOR	1.6kΩ,1/10W AB
CN1401	QGG2502K1-17	HEADER PIN	ABC	R510	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10W AB
*****				R511	NRVA02D-471X	CMF RESISTOR	470Ω,1/10W AB
TERMINAL BOARD ASSEMBLY <06>				R512	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10W AB
[HR-S8960EX, HR-S8965EK]				R513	NRVA02D-152X	CMF RESISTOR	1.5kΩ,1/10W AB
PW1	LPA10138-08A	TERM BOARD ASSY,S2EU/EK	AB	R514	NRVA02D-332X	CMF RESISTOR	3.3kΩ,1/10W AB
IC501	JCP8018	IC	AB	R515	NRVA02D-332X	CMF RESISTOR	3.3kΩ,1/10W AB
IC501	or JCP8028	IC	AB	R516	QUY160-100Y	IM BUS WIRE	AB
IC501	or JCP8028-01	IC	AB	R517	QUY160-100Y	IM BUS WIRE	AB
IC501	or JCP8038	IC	AB	R525	QRE141J-125Y	C RESISTOR	1.2MΩ,1/4W AB
IC502	VC2076DP	IC	AB	R527	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W AB
IC901	BH7636S	IC,CH+	AB	R531	NRSA02J-101X	MG RESISTOR	100Ω,1/10W AB
Q901	UN5211-X	DIGI TRANSISTOR	AB	R532	NRSA02J-101X	MG RESISTOR	100Ω,1/10W AB
Q901	or DTC114EUA-X	DIGI TRANSISTOR	AB	R533	NRSA02J-101X	MG RESISTOR	100Ω,1/10W AB
Q901	or RN1302-X	DIGI TRANSISTOR	AB	R534	NRSA02J-101X	MG RESISTOR	100Ω,1/10W AB
Q901	or PDTC114EU-X	DIGI TRANSISTOR	AB	R535	NRSA02J-101X	MG RESISTOR	100Ω,1/10W AB
Q902	2SB1218A/QR/-X	TRANSISTOR	AB	R536	NRSA02J-101X	MG RESISTOR	100Ω,1/10W AB
Q902	or 2SA1576A/QR/-X	TRANSISTOR	AB	R901	NRSA02J-750X	MG RESISTOR	75Ω,1/10W AB
Q902	or 2PA1576/R/-X	TRANSISTOR	AB	R902	NRSA02J-750X	MG RESISTOR	75Ω,1/10W AB
Q903	2SB1218A/QR/-X	TRANSISTOR,S OUT	AB	R903	QRE141J-680Y	C RESISTOR	68Ω,1/4W AB
Q903	or 2SA1576A/QR/-X	TRANSISTOR,S OUT	AB	R904	NQL402M-4R7X	INDUCTOR	4.7μH AB
Q903	or 2PA1576/R/-X	TRANSISTOR,S OUT	AB	R905	NQL402M-4R7X	INDUCTOR	4.7μH AB
Q904	2SB1218A/QR/-X	TRANSISTOR,S OUT	AB	R906	QQL231J-100Y	INDUCTOR	10μH AB
Q904	or 2SA1576A/QR/-X	TRANSISTOR,S OUT	AB	R907	QQL231J-100Y	INDUCTOR	10μH AB
Q904	or 2PA1576/R/-X	TRANSISTOR,S OUT	AB	R908	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W AB
Q905	UN521E-X	DIGI TRANSISTOR	AB	R909	NRSA02J-750X	MG RESISTOR	75Ω,1/10W AB
Q905	or DTC144WUA-X	DIGI TRANSISTOR	AB	R910	NRSA02J-750X	MG RESISTOR	75Ω,1/10W AB
Q905	or RN1309-X	DIGI TRANSISTOR	AB	R911	NRSA02J-750X	MG RESISTOR	75Ω,1/10W AB
Q905	or PDTC144WU-X	DIGI TRANSISTOR	AB	R912	NRSA02J-101X	MG RESISTOR	100Ω,1/10W AB
				R913	NRSA02J-101X	MG RESISTOR	100Ω,1/10W AB
				R914	QQL231J-100Y	INDUCTOR	10μH AB
				R915	QQL231J-100Y	INDUCTOR	10μH AB

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
R916	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W AB	C530	NDC21HG-221X	C CAPACITOR	220pF,50VG AB
R917	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB	C531	NDC21HG-301X	C CAPACITOR	300pF,50VG AB
R918	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB	C532	NDC21HG-301X	C CAPACITOR	300pF,50VG AB
R919	QRE141J-101Y	C RESISTOR	100Ω, 1/4W AB	C533	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
R920	QRE141J-101Y	C RESISTOR	100Ω, 1/4W AB	C534	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V AB
R921	QRE121J-391Y	C RESISTOR	390Ω, 1/2W AB	C535	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
R922	QRE121J-391Y	C RESISTOR	390Ω, 1/2W AB	C551	QEKJ1HM-105Z	E CAPACITOR	1μF,50V AB
R923	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W AB	C553	QCB1HK-103Y	C CAPACITOR	0.01μF,50V AB
R924	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W AB	C554	QEKJ1HM-105Z	E CAPACITOR	1μF,50V AB
R929	NRSA02J-820X	MG RESISTOR	82Ω, 1/10W AB	C556	QCB1HK-103Y	C CAPACITOR	0.01μF,50V AB
R930	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W AB	C557	QEKJ1HM-105Z	E CAPACITOR	1μF,50V AB
R931	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W AB	C559	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
R932	NRSA02J-511X	MG RESISTOR	510Ω, 1/10W AB	C560	QEKJ1HM-105Z	E CAPACITOR	1μF,50V AB
R933	NRSA02J-471X	MG RESISTOR	470Ω, 1/10W AB	C561	QEKJ1HM-105Z	E CAPACITOR	1μF,50V AB
R934	QRE141J-101Y	C RESISTOR	100Ω, 1/4W AB	C563	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
R935	QRE141J-101Y	C RESISTOR	100Ω, 1/4W AB	C568	NDC21HJ-680X	C CAPACITOR	68pF,50V AB
R936	QRE141J-101Y	C RESISTOR	100Ω, 1/4W AB	C569	NDC21HJ-680X	C CAPACITOR	68pF,50V AB
R937	QRE141J-101Y	C RESISTOR	100Ω, 1/4W AB	C570	NDC21HJ-680X	C CAPACITOR	68pF,50V AB
R938	QRE141J-101Y	C RESISTOR	100Ω, 1/4W AB	C571	NDC21HJ-680X	C CAPACITOR	68pF,50V AB
R939	QRE141J-101Y	C RESISTOR	100Ω, 1/4W AB	C572	NDC21HJ-680X	C CAPACITOR	68pF,50V AB
R940	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W AB	C573	NDC21HJ-680X	C CAPACITOR	68pF,50V AB
R941	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W AB	C575	NDC21HJ-101X	C CAPACITOR	100pF,50V AB
R942	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W AB	C901	NCB21HK-331X	C CAPACITOR	330pF,50V AB
R943	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB	C902	NCB21HK-331X	C CAPACITOR	330pF,50V AB
R944	NRSA02J-272X	MG RESISTOR	2.7kΩ, 1/10W AB	C903	NCB21HK-471X	C CAPACITOR	470pF,50V AB
R945	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W AB	C904	NCB21HK-471X	C CAPACITOR	470pF,50V AB
R946	NRSA02J-561X	MG RESISTOR	560Ω, 1/10W AB	C905	NCB21HK-331X	C CAPACITOR	330pF,50V AB
R947	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W AB	C906	NCB21HK-331X	C CAPACITOR	330pF,50V AB
R949	QRE121J-331Y	C RESISTOR	330Ω, 1/2W AB	C907	NCB21HK-471X	C CAPACITOR	470pF,50V AB
R951	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W AB	C908	NCB21HK-471X	C CAPACITOR	470pF,50V AB
R952	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W AB	C910	NCB21HK-102X	C CAPACITOR	0.001μF,50V AB
R953	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W AB	C912	NCB21HK-102X	C CAPACITOR	0.001μF,50V AB
R964	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W AB	C913	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
C501	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V AB	C914	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
C502	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V AB	C915	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
C503	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V AB	C916	NCB21HK-223X	C CAPACITOR	0.022μF,50V AB
C504	NCB21EK-104X	C CAPACITOR	0.1μF,25V AB	C917	NCB21HK-223X	C CAPACITOR	0.022μF,50V AB
C505	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V AB	C918	QCB1HK-223Y	C CAPACITOR	0.22μF,50V AB
C506	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB	C921	NDC21HJ-330X	C CAPACITOR	33pF,50V AB
C507	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V AB	C923	QEKJ1CM-476Z	E CAPACITOR	47μF,16V AB
C508	QEKJ1HM-474Z	E CAPACITOR	0.47μF,50V AB	C924	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
C509	QEKJ1CM-106Z	E CAPACITOR	10μF,16V AB	C925	NCB21HK-223X	C CAPACITOR	0.022μF,50V AB
C510	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V AB	C927	QEKJ1CM-476Z	E CAPACITOR	47μF,16V AB
C511	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB	C928	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
C512	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB	C931	QEKJ1EM-106Z	E CAPACITOR	10μF,25V AB
C513	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V AB	C935	NCB21HK-471X	C CAPACITOR	470pF,50V AB
C514	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB	C936	NCB21HK-471X	C CAPACITOR	470pF,50V AB
C515	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB	C937	NCB21HK-331X	C CAPACITOR	330pF,50V AB
C516	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB	C938	NCB21HK-331X	C CAPACITOR	330pF,50V AB
C518	NCB21EK-104X	C CAPACITOR	0.1μF,25V AB	C939	NCB21HK-471X	C CAPACITOR	470pF,50V AB
C519	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V AB	C940	NCB21HK-471X	C CAPACITOR	470pF,50V AB
C520	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V AB	C941	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V AB
C521	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V AB	C942	QEKJ1CM-476Z	E CAPACITOR	47μF,16V AB
C522	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V AB	C943	QEKJ1CM-107Z	E CAPACITOR	100μF,16V AB
C523	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V AB	C945	QEKJ1EM-106Z	E CAPACITOR	10μF,25V AB
C524	NDC21HG-301X	C CAPACITOR	300pF,50VG AB	C946	QEKJ1EM-106Z	E CAPACITOR	10μF,25V AB
C525	NDC21HG-301X	C CAPACITOR	300pF,50VG AB	C950	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V AB
C526	NDC21HJ-101X	C CAPACITOR	100pF,50V AB	C951	QEKJ1CM-476Z	E CAPACITOR	47μF,16V AB
C527	NDC21HJ-181X	C CAPACITOR	180pF,50V AB	C958	NCB21HK-331X	C CAPACITOR	330pF,50V AB
C528	NDC21HG-271X	C CAPACITOR	270pF,50VG AB	C959	NCB21HK-331X	C CAPACITOR	330pF,50V AB
C529	NDC21HG-820X	C CAPACITOR	82pF,50VG AB	L501	QLL29BJ-100Z	P COIL	10μH AB

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC	#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
L503	QQL29BJ-100Z	P COIL	10μH AB	R508	NRSA02J-151X	MG RESISTOR	150Ω, 1/10W C
L504	QQL29BJ-100Z	P COIL	10μH AB	R509	NRSA02J-162X	MG RESISTOR	1.6kΩ, 1/10W C
L505	QUY153-050Y	IM BUS WIRE	AB	R510	NRVA02D-102X	CMF RESISTOR	1kΩ, 1/10W C
L901	QQL231J-R22Y	INDUCTOR	0.22μH AB	R511	NRVA02D-471X	CMF RESISTOR	470Ω, 1/10W C
L902	QQL071J-1R0Y	INDUCTOR	1.0μH AB	R512	NRVA02D-102X	CMF RESISTOR	1kΩ, 1/10W C
L903	QQL071J-150Y	INDUCTOR	15μH AB	R513	NRVA02D-152X	CMF RESISTOR	1.5kΩ, 1/10W C
L904	QQL071J-150Y	INDUCTOR	15μH AB	R514	NRVA02D-332X	CMF RESISTOR	3.3kΩ, 1/10W C
L906	QUY153-050Y	IM BUS WIRE	AB	R515	NRVA02D-332X	CMF RESISTOR	3.3kΩ, 1/10W C
L907	QUY153-050Y	IM BUS WIRE	AB	R516	QUY160-100Y	IM BUS WIRE	C
L910	QQL071J-1R0Y	INDUCTOR	1.0μH AB	R517	QUY160-100Y	IM BUS WIRE	C
L913	QQL071J-4R7Y	INDUCTOR	4.7μH AB	R525	QRE141J-125Y	C RESISTOR	1.2MΩ, 1/4W C
L914	QQL071J-4R7Y	INDUCTOR	4.7μH AB	R527	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W C
L915	QQL071J-4R7Y	INDUCTOR	4.7μH AB	R533	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W C
L916	QQL071J-4R7Y	INDUCTOR	4.7μH AB	R534	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W C
L917	QQL071J-4R7Y	INDUCTOR	4.7μH AB	R535	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W C
L918	QQL071J-4R7Y	INDUCTOR	4.7μH AB	R536	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W C
L919	QQL071J-4R7Y	INDUCTOR	4.7μH AB	R917	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W C
L920	QQL071J-4R7Y	INDUCTOR	4.7μH AB	R918	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W C
J901	PEMC1177	RGB21PIN SOCKET,AV1	AB	R919	QRE141J-101Y	C RESISTOR	100Ω, 1/4W C
J902	PEMC1177	RGB21PIN SOCKET,AV2	AB	R920	QRE141J-101Y	C RESISTOR	100Ω, 1/4W C
J904	QND0084-001	S JACK,S OUT	AB	R921	QRE121J-331Y	C RESISTOR	330Ω, 1/2W C
J915	QNN0418-003	PIN JACK,A.OUT(L)	AB	R922	QRE121J-331Y	C RESISTOR	330Ω, 1/2W C
J916	QNN0418-002	PIN JACK,A.OUT(R)	AB	R923	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W C
J921	PU60659	MINI JACK,SAT.CTL	AB	R924	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W C
J922	PU60659	MINI JACK,PAUSE/RAE	AB	R925	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W C
△ TB1	LP21028-002A	TERMINAL BOARD	AB	R926	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W C
ET1	LP30918-001A	EARTH PLATE,FOR EMC	AB	R927	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W C
ET2	LP30915-001A	EARTH PLATE	AB	R928	QRE141J-750Y	C RESISTOR	75Ω, 1/4W C
OT1	QYTD5F3008Z	TAP SCREW,X6	AB	R929	NRSA02J-820X	MG RESISTOR	82Ω, 1/10W C
CN911	QGB2024J1-10S	B TO B CONNE	AB	R930	NRSA02J-750X	MG RESISTOR	75Ω, 1/10W C
CN912	QGB2024J1-12S	B TO B CONNE	AB	R949	QRE121J-331Y	C RESISTOR	330Ω, 1/2W C
CN913	QGB2024J1-10S	B TO B CONNE	AB	R952	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W C
CN914	QGB2024J1-11S	B TO B CONNE	AB	R961	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W C
CN915	QGB2024J1-09S	B TO B CONNE	AB	R962	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W C
CN916	QGF1208F1-04	FPC CONNE,FRONT S IN	AB	R963	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W C
*****				△ R966	QRE141J-102Y	C RESISTOR	1kΩ, 1/4W C
TERMINAL BOARD ASSEMBLY <06> [HR-S8960AG]				C501	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V C
PW1	LPA10138-06A	TERMINAL BOARD ASSY	C	C502	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V C
IC501	JCP8018	IC	C	C503	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V C
IC501 or JCP8028	IC		C	C504	NCB21EK-104X	C CAPACITOR	0.1μF,25V C
IC501 or JCP8028-01	IC		C	C505	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V C
IC501 or JCP8038	IC		C	C506	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
IC502	VC2076DP	IC	C	C507	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V C
Q903	2SB1218A/QR/-X	TRANSISTOR,S OUT	C	C508	QEKJ1HM-474Z	E CAPACITOR	0.47μF,50V C
Q903 or 2SA1576A/QR/-X	TRANSISTOR		C	C509	QEKJ1CM-106Z	E CAPACITOR	10μF,16V C
Q903 or 2PA1576/R/-X	TRANSISTOR		C	C510	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V C
Q904	2SB1218A/QR/-X	TRANSISTOR,S OUT	C	C511	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
Q904 or 2SA1576A/QR/-X	TRANSISTOR		C	C512	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
Q904 or 2PA1576/R/-X	TRANSISTOR		C	C513	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V C
Q910	2SB1218A/QR/-X	TRANSISTOR	C	C514	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
Q910 or 2SA1576A/QR/-X	TRANSISTOR		C	C515	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
Q910 or 2PA1576/R/-X	TRANSISTOR		C	C516	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
R503	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W C	C518	NCB21EK-104X	C CAPACITOR	0.1μF,25V C
R504	NRSA02J-332X	MG RESISTOR	3.3kΩ, 1/10W C	C519	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V C
R505	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W C	C520	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V C
R506	NRSA02J-391X	MG RESISTOR	390Ω, 1/10W C	C521	QEKJ1HM-475Z	E CAPACITOR	4.7μF,25V C
R507	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W C	C522	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V C
				C523	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V C
				C524	NDC21HG-301X	C CAPACITOR	300pF,50VG C
				C525	NDC21HG-301X	C CAPACITOR	300nF,50VG C

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC
C526	NDC21HJ-101X	C CAPACITOR	100pF,50V C
C527	NDC21HJ-181X	C CAPACITOR	180pF,50V C
C528	NDC21HG-271X	C CAPACITOR	270pF,50VG C
C529	NDC21HG-820X	C CAPACITOR	82pF,50VG C
C530	NDC21HG-221X	C CAPACITOR	220pF,50VG C
C531	NDC21HG-301X	C CAPACITOR	300pF,50VG C
C532	NDC21HG-301X	C CAPACITOR	300pF,50VG C
C533	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
C534	QEKJ0JM-476Z	E CAPACITOR	47μF,6.3V C
C535	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
C554	QEKJ1HM-105Z	E CAPACITOR	1μF,50V C
C556	QCB1HK-103Y	C CAPACITOR	0.01μF,50V C
C557	QEKJ1HM-105Z	E CAPACITOR	1μF,50V C
C559	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
C560	QEKJ1HM-105Z	E CAPACITOR	1μF,50V C
C561	QEKJ1HM-105Z	E CAPACITOR	1μF,50V C
C563	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
C910	NCB21HK-102X	C CAPACITOR	0.001μF,50V C
C912	NCB21HK-102X	C CAPACITOR	0.001μF,50V C
C913	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
C914	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
C928	NCB21HK-103X	C CAPACITOR	0.01μF,50V C
C929	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W C
C931	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V C
C941	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V C
C942	QEKJ1CM-476Z	E CAPACITOR	47μF,16V C
C948	QEKJ1CM-476Z	E CAPACITOR	47μF,16V C
C949	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V C
C950	QEKJ0JM-227Z	E CAPACITOR	220μF,6.3V C
C951	QEKJ1CM-476Z	E CAPACITOR	47μF,16V C
L501	QQL29BJ-100Z	P COIL	10μH C
L503	QQL29BJ-100Z	P COIL	10μH C
L504	QQL29BJ-100Z	P COIL	10μH C
L903	QUY153-050Y	IM BUS WIRE	C
L904	QUY153-050Y	IM BUS WIRE	C
L906	QUY153-050Y	IM BUS WIRE	C
L907	QUY153-050Y	IM BUS WIRE	C
L912	QUY153-050Y	IM BUS WIRE	C
L921	QUY153-050Y	IM BUS WIRE	C
L922	QUY153-050Y	IM BUS WIRE	C
J903	QND0084-001	S JACK,S IN	C
J904	QND0084-001	S JACK,S OUT	C
J911	QNN0418-004	PIN JACK,V.IN	C
J912	QNN0418-003	PIN JACK,A.IN(L)	C
J913	QNN0419-002	PIN JACK,A.IN(R)	C
J914	QNN0418-004	PIN JACK,V.OUT	C
J915	QNN0418-003	PIN JACK,A.OUT(L)	C
J916	QNN0418-002	PIN JACK,A.OUT(R)	C
J922	PU60659	MINI JACK,PAUSE/RAE	C
B904	QUY160-100Y	IM BUS WIRE,RCA V OUT	C
BT901	QNZ0032-001	BATTERY HOLDER,BT BUCK UP	C
△ TB1	LP21028-003A	TERMINAL BOARD	C
OT1	QYTDSF3008Z	TAP SCREW,X2	C
ET1	LP30918-001A	EARTH PLATE, FOR EMC	C
ET2	LP30915-001A	EARTH PLATE	C
CN911	QGB2024J1-10S	B TO B CONNE	C
CN912	QGB2024J1-12S	B TO B CONNE	C
CN913	QGB2024J1-10S	B TO B CONNE	C
CN914	QGB2024J1-11S	B TO B CONNE	C
CN915	QGB2024J1-09S	B TO B CONNE	C
CN916	QGF1208F1-04	FPC CONNE,FRONT S IN	C

#/ REF No.	PART No.	PART NAME, DESCRIPTION	ABC

A/C HEAD BOARD ASSEMBLY <12>			
PW1	LPA10158-01A1	A/C HEAD BOARD ASSY	ABC

DEMOM BOARD ASSEMBLY <14> [HR-S8960EX, HR-S8965EK]			
PW1	LPA10094-09A	DEMOM BOARD ASSY	AB
IC6701	MSP3417G-X	IC	AB
IC6701 or	MSP3417GQGB8V3X	IC	AB
IC6701 or	MSP3417D-X	IC	AB
Q6701	2SC3936/BC/-X	TRANSISTOR	AB
D6701	1SS133-T2	SI DIODE	AB
D6701 or	1N4148M-T2	DIODE	AB
R6701	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W AB
R6702	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W AB
R6703	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB
R6704	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W AB
R6705	NRSA02J-271X	MG RESISTOR	270Ω, 1/10W AB
R6707	NQR0200-003X	FERRITE BEADS	AB
R6708	NQR0200-003X	FERRITE BEADS	AB
R6709	NQR0200-003X	FERRITE BEADS	AB
R6710	NQR0200-003X	FERRITE BEADS	AB
R6711	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W AB
R6712	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W AB
R6713	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W AB
R6714	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W AB
R6715	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W AB
R6716	NQR0200-003X	FERRITE BEADS	AB
R6719	QRE141J-103Y	C RESISTOR	10kΩ, 1/4W AB
R6720	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W AB
R6721	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W AB
C6701	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
C6704	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
C6707	NDC21HJ-470X	C CAPACITOR	47pF,50V AB
C6708	NDC21HJ-7R0X	C CAPACITOR	7pF,50V AB
C6709	NDC21HJ-3R0X	C CAPACITOR	3pF,50V AB
C6713	NCF21CZ-224X	C CAPACITOR	0.22μF,16V AB
C6714	NCB21HK-222X	C CAPACITOR	0.0022μF,50V AB
C6715	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V AB
C6716	NCB21HK-222X	C CAPACITOR	0.0022μF,50V AB
C6717	QEKJ1HM-225Z	E CAPACITOR	2.2μF,50V AB
C6719	QEKJ1EM-106Z	E CAPACITOR	10μF,25V AB
C6720	QEKJ1EM-106Z	E CAPACITOR	10μF,25V AB
C6721	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
C6723	NCB21HK-103X	C CAPACITOR	0.01μF,50V AB
L6701	QUY153-050Y	IM BUS WIRE	AB
X6701	QAX0443-001	CRYSTAL	AB
K6701	NRSA02J-330X	MG RESISTOR	33Ω, 1/10W AB
K6702	NQR0200-003X	FERRITE BEADS	AB
K6703	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W AB
K6704	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB
K6705	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W AB
K6706	NRSA02J-470X	MG RESISTOR	47Ω, 1/10W AB
BK1	LP40425-001A	BRACKET(PWB)	AB
CN6701	QGG2502K1-10	HEADER PIN	AB

MODEL	MARK
HR-S8960EX	A
HR-S8965EK	B
HR-S8960AG	C

#! REF No. PART No. PART NAME, DESCRIPTION ABC

DEMOM BOARD ASSEMBLY <14> [HR-S8960AG]

PW1	LPA10094-08A	DEMOM BOARD ASSY	C
IC6701	MSP3417D-X	IC	C
IC6701 or	MSP3417DG3-X	IC	C
IC6701 or	MSP3417G-X	IC	C
Q6701	2SC3936/BC/-X	TRANSISTOR	C
D6701	1SS133-T2	SI DIODE	C
D6701 or	1N4148M-T2	DIODE	C
R6701	NRSA02J-392X	MG RESISTOR	3.9kΩ, 1/10W C
R6702	NRSA02J-682X	MG RESISTOR	6.8kΩ, 1/10W C
R6703	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W C
R6704	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W C
R6705	NRSA02J-271X	MG RESISTOR	270Ω, 1/10W C
R6707	NQR0200-003X	FERRITE BEADS	C
R6708	NQR0200-003X	FERRITE BEADS	C
R6709	NQR0200-003X	FERRITE BEADS	C
R6710	NQR0200-003X	FERRITE BEADS	C
R6711	NRSA02J-104X	MG RESISTOR	100kΩ, 1/10W C
R6712	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W C
R6714	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W C
R6716	NQR0200-003X	FERRITE BEADS	C
R6719	QRE141J-103Y	C RESISTOR	10kΩ, 1/4W C
R6720	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W C
R6721	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W C
C6701	NCB21HK-103X	C CAPACITOR	0.01μF, 50V C
C6703	NDC21HJ-181X	C CAPACITOR	180pF, 50V C
C6704	NCB21HK-103X	C CAPACITOR	0.01μF, 50V C
C6707	NDC21HJ-470X	C CAPACITOR	47pF, 50V C
C6708	NDC21HJ-7R0X	C CAPACITOR	7pF, 50V C
C6709	NDC21HJ-3R0X	C CAPACITOR	3pF, 50V C
C6713	NCF21CZ-224X	C CAPACITOR	0.22μF, 16V C
C6714	NCB21HK-222X	C CAPACITOR	0.0022μF, 50V C
C6715	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V C
C6716	NCB21HK-222X	C CAPACITOR	0.0022μF, 50V C
C6717	QEKJ1HM-225Z	E CAPACITOR	2.2μF, 50V C
C6719	QEKJ1EM-106Z	E CAPACITOR	10μF, 25V C
C6720	QEKJ1EM-106Z	E CAPACITOR	10μF, 25V C
C6721	NCB21HK-103X	C CAPACITOR	0.01μF, 50V C
C6723	NCB21HK-103X	C CAPACITOR	0.01μF, 50V C
L6701	QUY153-050Y	IM BUS WIRE	C
L6702	QQL231J-3R3Y	INDUCTOR	3.3μH C
X6701	QAX0443-001	CRYSTAL	C
K6701	NRSA02J-330X	MG RESISTOR	33Ω, 1/10W C
K6702	NQR0200-003X	FERRITE BEADS	C
K6703	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W C
K6704	NRSA02J-102X	MG RESISTOR	1kΩ, 1/10W C
K6705	NRSA02J-100X	MG RESISTOR	10Ω, 1/10W C
K6706	NRSA02J-470X	MG RESISTOR	47Ω, 1/10W C
BK1	LP40425-001A	BRACKET(PWB)	C
CN6701	QGG2502K1-10	HEADER PIN	C

#! REF No. PART No. PART NAME, DESCRIPTION ABC

S JACK BOARD ASSEMBLY <36>

PW1	LPA20009-01B	S JACK BOARD ASSY	ABC
J7102	QND0085-001	S JACK	ABC
CN7108	QGF1209F1-04	FPC CONNE	ABC

ADV.JOG BOARD ASSEMBLY <39>

PW1	LPA10191-03A	ADV.JOG BOARD ASSY	ABC
R7047	QRE141J-472Y	C RESISTOR	4.7kΩ, 1/4W ABC
UN7001	QSW0938-001	ROTARY ENCODER,400K	ABC
S7030	QSW0456-002Z	TACT SWITCH,24H EXP	ABC
CN7004	QGF1209F1-04	FPC CONNE,1-4	ABC

LOADING MOTOR BOARD ASSEMBLY <55>

PW2	LPA10158-01A2	LOADING MOTOR BOARD ASSY	ABC
-----	---------------	--------------------------	-----